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Original Articles.

THE VARIOUS METHODS OF PRESERVING AND MOUNTING GROSS EYE PREPARATIONS.*

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Early methods of preserving the enucleated eyeball and other ocular tissues were very crude. The specimen was generally placed in a bottle of ethylic or methyl alcohol of unknown strength, which not only bleached and hardened the tissues, but rendered them useless for future microscopic sections. Shrinking of the globar walls and intraocular structures proceeded until the parts became unfit for use, either as museum preparations or for other teaching purposes. Attempts were now and then made, by the addition of glycerin and other agents to the alcohol, to retard these changes, but with little permanent success. Bichlorid solutions, Müller's fluid and other chromate preparations were found to be improvements on the alcohol mixtures, but even these were not satisfactory, requiring constant care and frequent changing of the fluid, else the tissues were not affected by stains subsequently used for microscopic sections. In any case the cornea became opaque, the iris discolored, the other parts stained, and only the coarsest changes in the bisected globe, such as tumors, dislocated lenses, detached retinæ, etc., could be distinguished. Indeed, it was not until Priestley Smith devised his well-known plan of preparing and mounting the divided eyeball in a glass receptable containing gelatin that a decided advance was made in the preservation and exhibition of gross specimens.

Preparations of thick sections of the eyeball may be preserved, although not as effectively as in specimen jars, by placing them on discs of opal glass over which a little prepared and melted jelly has been poured. The specimen is now covered with more jelly, air bubbles are removed by pricking them, and when the mass is hard enough a plano-convex lens is attached to the surface of the specimen just as one would apply a cover glass.

DRY METHODS OF PREPARATION.

An ingenious plan was that of Hyrtl. He pierced the optic nerve of the enucleated eyeball and through the opening expressed the intraocular contents. The hollow globe was then inflated and dried. Beyond demonstrating the size and shape of the eye this method is useless, and has long been abandoned.

A more profitable proceeding is to harden the divided globe in alcohol, dehydrate by any suitable method and soak for ten days in turpentine. At the end of this time the tissues will be quite transparent. Now allow the turpentine to evaporate slowly. Such a specimen, if merely protected from dust, will keep indefinitely and will, especially when examined with a lens, show the tissues almost as well as in any of the preparations about to be described. However, these preparations degenerate in time, owing to injury from handling and from exposure to dust and smoke.

THE PRIESTLEY SMITH GELATIN METHOD.

The eyeball, generally preserved in Müller's fluid, is frozen,[1] divided by means of a sharp razor and, when required, immersed in a 2 per cent. chloral-hydrate solution to remove at least a part of Müller's stain. This procedure is repeated every day or two until no staining of the immersion fluid results. To prevent shrinkage of the half eye when it is placed in the jelly, it is next given, for 24 hours each, a bath of 10, 25 and 50 per cent. glycerin. It is now (concave surface up) transferred to the glass jar, which should be about half filled with the melted gelatin. When the fluid jelly has entirely filled the hemisphere it is turned over so that its plane surface is accurately applied to the bottom of the specimen jar. Great care must be observed to prevent the retention of air bubbles within the globe or in the gelatin surrounding it. When the jelly is hard the jar is carefully filled with more gelatin.

The jelly consists of Coignet et Cie's gelatin, 1 part, glycerin and water, of each, 8 parts by weight. Slowly dissolve the gelatin in the water by the aid of gentle heat; add the white of one egg; boil thoroughly and filter through flannel. Finally, stir in the glycerin, to which has been added 0.1 per cent. of carbolic acid. The jar covers may be of ordinary clear glass, or of the white opalescent variety, cemented by means of four parts of gutta percha and one part of pitch. The jars were originally made by and can be had of Messrs. Osler, Broad street, Birmingham, England. Treacher Collins suggested that a plano-convex lens be cemented on the upper surface of the jars by means of Canada balsam. This arrangement enlarges considerably the intraocular image and shows the minor details of the specimens. At the request of the committee several gentlemen (whose efforts contributed much to the success of the exhibit at New Orleans and whose practical experience permits them to speak with authority) have furnished a description of their favorite methods of mounting macroscopic eye preparations.

Dr. George Sloan Dixon[2] published an article on the "Preservation of Macroscopic Eye Specimens," most of

* Report of the Committee on Exhibit of Pathologic Preparations at the Section on Ophthalmology, American Medical Association, New Orleans, May 5-8, 1903. Casey A. Wood, Chairman; H. V. Würdemann and E. A. Shumway.

1. See the Ophthalmic Review, March, 1883.
2. New York Eye and Ear Infirmary Reports, January, 1898.

which is here reprinted with an addendum giving a few modifications made by him since its publication. This monograph furnishes a complete description of the formalin-jelly method of preparing the Priestley Smith mounts. It will also be seen that, in many respects, it is a decided improvement over the original mode of preparation.

The preparation of macroscopic eye specimens was very unsatisfactory until the advent of formalin as a hardening reagent. Time is also greatly economized by the use of formalin, as it requires but twenty-four hours to effect the preliminary hardening.

Formalin will not harden the vitreous, although it has the property of rendering this substance less viscid. For example, if an eye be removed from the formalin bath at the end of the first twenty-four hours and divided, the normal vitreous will be of a consistence similar to thin syrup, and is sure to be lost during subsequent manipulation.

In the majority of instances the loss of vitreous is of no great importance, but a more nearly normal macroscopic specimen will of course be obtained if it be preserved, and in some cases it is quite necessary. Therefore, in specimens where it is desirable to retain the vitreous, alcohol must be employed.

Another advantage obtained by the use of formalin, especially in intraocular tumor specimens, is that the

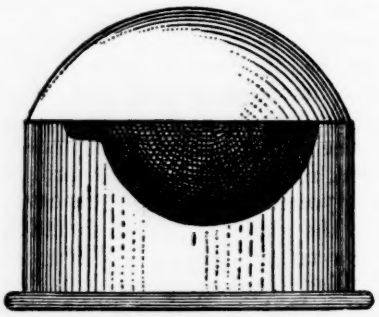

Fig. 1.—Treacher Collins' modification of the Priestley Smith jar.

finished mount shows the original colors to have been almost wholly retained, very little bleaching occurring.

As soon as possible after enucleation puncture the globe at or near the equator with a small knife, in order to admit the fluid, and place it in a wide-mouth bottle containing a little absorbent cotton, and enough of a 10 per cent. solution of formalin in distilled water to cover it. Allow the eye to remain in this solution for twenty-four hours, and then transfer it to weak alcohol, 25 per cent. to 50 per cent., depending on the density of the globe, and increase the strength of the alcohol by about 10 per cent. daily. An inclination to collapse is an indication that the alcohol is being increased too rapidly. When the strength of the alcohol has reached 80 per cent., allow the specimen to remain in it for four days, or indefinitely if intended for future use. At the end of this time the vitreous will have become sufficiently dense to permit division of the globe without loss.

The next step in the progress is to remove the alcohol in order to permit the globe to be frozen. This is done by placing it in from ten to twenty times its volume of water for twenty-four hours. It is well to change the water at least once, though this is seldom necessary. When the globe has settled to the bottom of the vessel, sufficient alcohol will usually have been removed to allow freezing.

The freezing box should not be less than seven inches square—nine inches is a very good size. It should have a few holes in the bottom for the purpose of drainage.

Remove the globe from the water, dry it carefully with a soft towel or piece of gauze, cut off the nerve close to the sclerotic and draw an ink line from cornea to nerve on both sides to indicate the direction desired to cut. In the majority of instances the horizontal plane is selected. Wrap the globe in oiled silk, without pressure on the globe. Fill the box with mixed pounded ice and salt, deposit the globe in the middle, cover and allow it to remain in a cool place for one hour. Remove the globe, rest it on a piece of cork and divide it quickly with a thin sharp knife in the line previously drawn, being careful not to employ more sawing motion than is absolutely necessary, and further, do not rest the cornea on the cork.

Having divided the globe, place the hemispheres in distilled water to thaw. After ten or fifteen minutes remove the half selected for microscopic examination to 25 or 50 per cent. alcohol, and gradually increase the strength from day to day until 80 per cent. has been reached, where it may remain awaiting the further treatment required for imbedding. At the same time transfer the half selected for the macroscopic specimen to a 5 per cent. aqueous solution of chloral hydrate for twenty-four hours; glycerin and one-third water twenty-four hours; finally, equal parts of glycerin and water for twenty-four hours, when it will be ready to mount in glycerin jelly.

The formula for glycerin jelly has been repeatedly published, but as ordinarily made it almost invariably has a marked amber tinge. This may be due to the quality of the gelatin used, but we think this is frequently caused by the material through which it is filtered, flannel usually being recommended. The best quality of (so-called "French Gold Label") gelatin should be used, and nothing containing color should come in contact with the jelly during its preparation—even the shells of the eggs employed should be rejected if not pure white.

The following method of preparing the jelly has been uniformly successful in our hands, and we, therefore, give it in detail: Take gelatin, 1 part; water, 8 parts, and glycerin, 8 parts.

We generally add a trifle more gelatin, say 0.5 per cent. Cut the gelatin into small pieces, place in a glass vessel with a very wide mouth (fruit-jars are unreliable—agateware works well), add the water, cover and let it stand for an hour, then place the whole in an Arnold sterilizer, or in a water bath, and apply only sufficient heat to dissolve the gelatin. When dissolved stir in the albumin of one fresh egg (with its shell if white) for each ℥viii. Replace in the sterilizer and boil until complete separation has occurred. Filter hot through absorbent cotton. A hot-water funnel is useful for this purpose. If the filtrate is not absolutely clear repeat the operation. The glycerin is then added, and also enough carbolic acid to preserve it—not more than ℥i of a 10 per cent. aqueous solution for each ℥vi of jelly.

If carefully made in this manner the jelly will be almost free from color, and of about the same index of refraction as the glass of which the macroscopic cups are made.

The jelly should be kept in two flasks, a large one for stock and a small one for use from day to day; both should be closed with cotton-wool plugs. The larger (or stock) flask should be heated only when necessary to fill

the smaller one. Exclude light as much as possible. If evaporation occurs to any considerable extent before the jelly has been used, a little sterilized distilled water can be added.

The specimen is now ready to embed in its macroscopic cup. The cups (see cut) in use in this institution are 1⅞ inches in diameter by 15/16 inch deep, made of crown glass, upper surface highly polished and edge ground true.

Remove the surplus glycerin and water from the specimen and deposit it in the cup, cut surface up. Fill the cup with warm (not hot) jelly, tease out with warm needles all the air bubbles that have become imprisoned, turn the specimen over, press it firmly on the bottom of the cup, examine over a mirror, center and retain it in position by means of a small piece of cigar box (⅝ by 2 inches), through the center of which an ordinary pin has been driven. It is not necessary that the pin should penetrate the specimen, but it should be long enough to permit the greater part of the weight of the piece of wood to be transferred to the specimen at the point of the pin. If the mount is satisfactory place it under a bell-jar to exclude dust, and with it a piece of absorbent cotten saturated with about a dram of formalin.

The statement has been made several times that the exposure of nutrient jelly to the vapor of formalin renders it insoluble by heat. Formalin vapor, free under a bell-jar, will render the surface of glycerin jelly in macroscopic cups denser to a very slight depth, but not wholly insoluble. A cup of jelly so exposed for five days could still be completely melted in an Arnold sterilizer, with the exception of a very small ring at the margin of the cup.

Although formalin vapor acting on glycerin jelly under a bell-jar does not render the entire mass insoluble, no mean advantage is gained by its use, as a greater degree of heat is required to cause it to "run" and displace the specimen. In fact, I have frequently noted liquefaction of old mounts during the summer months when the thermometer stood at 98 or 99 F., although the usual melting-point of normal glycerin jelly is about 105 F.

It would seem hardly necessary to call attention to the fact that pathologic specimens should not be exposed to a greater degree of heat than is absolutely necessary; but this should particularly be borne in mind with reference to the eye, as immediately the limit of heat is reached (and the degree is comparatively low), the globe, or hemisphere, will suddenly collapse and be damaged beyond hope of repair. Therefore, if there is any likelihood of necessity arising for redissolving the glycerin jelly surrounding a specimen, we would advise against the use of formalin for "setting" the jelly.

After standing for two or three days, the cup should be sealed to prevent further evaporation. We have found the most satisfactory material for this purpose to be porcelainized glass. It is pure white, and greatly improves the appearance of the specimen. It is attached to the bottom of the cup with Stratena or Major's cement, applied hot. A celluloid disc answers the same purpose, but it is not pure white, and we have been unable to find a satisfactory cement for it.

The mount has now been completed and can be filed away, but we prefer to still further protect it by cementing it into a square wooden base. These blocks are made of mahogany, and are countersunk in the middle about a quarter of an inch.

It is occasionally an advantage to cement a lens to the upper surface of the cup to show a foreign body, or anything of especial interest located below the surface. For ordinary specimens, however, we consider a permanent lens a useless expense, and, in the majority of cases, a disadvantage. When applied, for which Canada balsam should be used, the lens should be warm, and, of course, the surface absolutely clean.

The accompanying full-size outline cut shows all the parts referred to, and their relations.

Specimens prepared in this manner, if properly sealed, should remain in perfect condition indefinitely; but it will occasionally happen that the cement may not have perfectly attached the disc to the cup, and slow evaporation will occur. This will sooner or later be manifested by fissure of the gelatin, necessitating remounting if the fissures can not be filled with fresh jelly without imprisoning air. A good result can be obtained by cutting away the jelly about the specimen with a sharp knife, leaving smooth surfaces and the specimen *in situ;* then refill the cup with warm jelly. In case air has found its way under the specimen, cut off the upper surface of the jelly and melt with very gentle heat (not over 112 F.) and remount as before.

The well-known fact that exposure to light tends to darken gelatin suggests the advisability of shielding the mounted specimens from strong light especially.

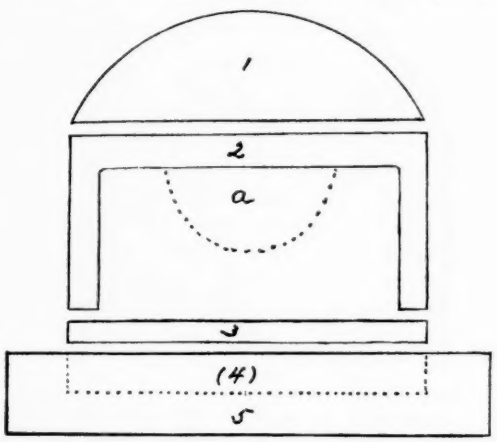

Fig. 2.—Full-size outline figure of macroscopic cup and accessories (Dixon). 1, Lens; 2, macroscopic cup; 3, porcelainized glass disc; 5, mahogany base showing (4) portion countersunk for reception of 2 and 3; (*a*) specimen.

July 1, 1903.—About the only modifications made in the foregoing methods since its publication consists in the more thorough drying of the specimen with calcium chlorid under a bell-jar, and a change in the manner of cementing the bottom on.

For this purpose we use Bell's cement, sometimes Major's cement, and sometimes Stratena. After the cement has thoroughly set we give the joint two or three coats of zinc white, allowing each to dry thoroughly, and then for a finish apply a ring of asphalt. The latter is, however, not necessary.

Care should be taken not to expose the specimen too long to formaldehyd, as a reaction is likely to occur rendering the jelly opalescent. This causes no special damage, but the jelly ceases to be sparkling.

The disadvantage of the method is that in very hot weather the jelly may become liquid in a few specimens, but this has been largely obviated by turning the specimens upside down.

The advantages are that the natural colors can be in the main preserved, all the parts are held in their normal

positions by the density of the medium, they are readily photographed, and they can be transported with safety; beside a globe damaged during laboratory manipulation can be restored with a little patience and a hot needle.

Dr. Harold G. Goldberg (Wills Eye Hospital, Philadelphia) prefers the formalin-glycerin-jelly method modified as follows: Gelatin (best French) oz. i. Cut in small strips and soak in water for twelve hours, pour off water and dissolve in solution (x).—Glycerin, fl. oz. viii; water, fl. oz. viii.

Egg albumin, fl. oz. vi; thoroughly break up in graduate with spoon and mix with fl. oz. iii of sol. marked x, which should be hot when mixed. Filter through flannel into remaining sol. marked x, and mix thoroughly; place on water bath and after coming to boiling point, allow solution to simmer without stirring for five minutes until all the albumin is coagulated. Filter through hot water funnel, or anything that will serve the same purpose, and add 30 m. of pure formalin, a drop at a time, stirring after each drop to prevent lumps forming; then cool.

This jelly is almost colorless, transparent and very firm, and is not melted by summer heat; in fact, after the jelly is several months old it is very difficult to melt it, even by prolonged exposure to the heat of a water bath.

In cases where the tissues are thoroughly impregnated with about 10 per cent. formalin solution before mounting, the additional formalin causes the jelly to contract, as it grows older (possibly over a period of several months), squeezing the water contained in it from its substance. This collects on the surface in drops; therefore, I do not permanently seal the lid of the cell until this complete contraction has taken place, nor do I quite fill the cell with jelly, allowing sufficient space for the water to collect. After this contraction has taken place, it is impossible to melt the jelly with even the actual flame; it will burn, but not melt, and if it becomes necessary to remove the tissue the jelly must be dissolved away.

Tissues hardened in 5 or 10 per cent. formalin solution having remained in the solution several days, may be frozen, cut and mounted without any further preparation.

If tissues hardened by the other methods, after having passed through the alcohols, are placed in a 5 or 10 per cent. solution of formalin for twelve hours, their preservation in the jelly will be more complete and permanent.

When the tissues are impregnated with the formalin solution, a capsule 5 or 6 mm. in thickness is formed around the eye, due to the hardening action of the formalin on the jelly. If the vitreous chamber is not already filled it will be occupied by a mass of tough jelly which preserves the form of the globe.

In any event, all alcohol must be removed from the tissues before mounting in the jelly or air bubbles will form around the tissues and spoil the appearance of the mount. I have mounted a number of eyes that had remained in 10 per cent. formalin solution only twelve hours. These were frozen, cut and mounted in the jelly immediately, thus practically preserving the first changes noticed. I believe it is possible (although I have never had an opportunity to try it) to preserve a perfectly fresh specimen in the jelly without any preparation whatever.

I obtain my mounts (the ordinary cut glass dishes, with white covers) from Wall & Ochs, opticians, Philadelphia. The jars are sealed with common white photographic paste (which is easily removed) until contraction has completely taken place. Then the water, which I have described as collecting for months, is removed and the jars permanently sealed with xylol-balsam.

The advantages of this jelly, beside those I have already mentioned, are that it is a preservative for the tissues, which can be removed from it within several months, or possibly longer, and cut and stained for microscopic study. It also fixes the natural color of the tissues and is easily prepared. I have some specimens that I placed three years ago in this jelly that are quite as good to-day as when first preserved.

Dr. Allen Greenwood, Boston, does not claim originality for the method he prefers.

In order to preserve the colors he hardens the enucleated eye by the Kaiserling method as follows:

1. Fixation for 1 to 4 days in

Formaldehyd	200
Water	1,000
Nitrate of potassium	15
Acetate of potassium	30

2. Drain and place in 80 per cent. alcohol for 1 to 6 hours, then in 95 per cent. alcohol for 1 to 2 hours to restore the color.

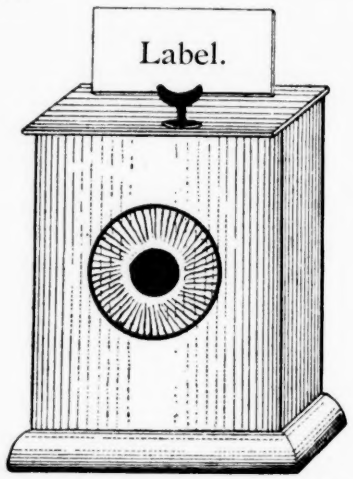

Fig. 3.—Jar for museum specimens (Greeff).

3. Preserve in

Acetate of potassium	200
Glycerin	400
Water	2,000

Fixation should be performed in the dark and the specimen kept in a dark place.

To section the eye it is first frozen by packing in pounded ice and salt.

The half eye to be mounted is then placed in the glass dish with the cut surface down and the melted glycerin jelly poured in. If the glass dish is put on ice the layer of jelly next to the specimen will harden and the eye be held in place until the whole mass is hard enough to prevent the eye from floating. The dish should be filled full enough to exclude all air bubbles when the lid is applied. After the jelly becomes hard the lid is sealed on with Canada balsam.

The jelly is made as follows from a formula given by Dr. Verhoef.

Best French gelatin (Coignet's gold label)	30 grms.
Cold saturated boric acid sol.	240 c.c.

Add 80 c.c. of glycerin and the white and shell of an egg, heat in a water bath, add 1 c.c. of glacial acetic acid

to precipitate the albumin, boil thoroughly for some minutes and then filter three or four times. Put the filtering apparatus in a steam sterilizer to prevent hardening of the jelly.

PERMANENT PREPARATIONS IN FLUID PRESERVATIVES.

Once surrounded by and impregnated with jelly, it is with great difficulty and small satisfaction that the bulbar hemisphere is utilized for microscopic purposes. This drawback can be obviated by its preservation in suitable fluids. The best known method is that of Greeff, a cut of whose jar for museum specimens is here given. A description of this form of preparation will be found in this author's small primer,[3] *Anleitung zur*

Fig. 4.—Jar for mounting gross eye specimens (Thomson).

mikroskopischen Untersuchung des Auges, 1898, pp. 67, 69.

A number of modifications of the original method have been proposed by various pathologists, both as regard the form of the glass receptacle and the preserving fluid.

Dr. Edgar S. Thomson (Manhattan Eye and Ear Infirmary) advises that the specimen, after a thorough

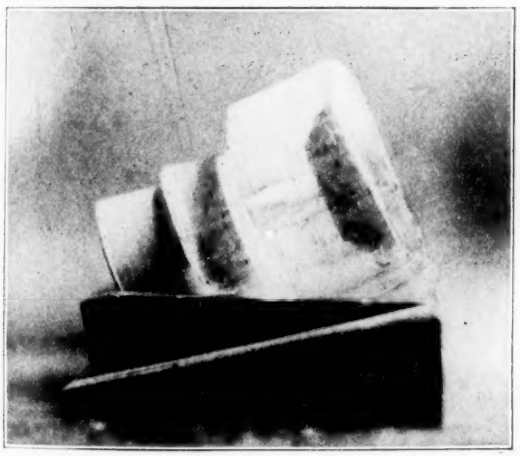

Fig. 5.—The Specimen held in position by a glass rod (Thomson).

washing, be hardened for 24 hours in formalin, 4 per cent. The globe is then bisected, and the piece intended for mounting is wrapped in absorbent cotton, to prevent shrinkage, and immersed for three days in the following solution:

Acetate of soda	3
Kali chlorid	5
Formalin	10
Water	100

The specimen is then wrapped in a fresh piece of cotton and immersed in alcohol varying between 80 and 95 per cent., depending on the strength and resistance of the specimen to shrinkage. The alcohol should be as strong as possible. It is immersed in this for twenty-four years, and finally is soaked for two or three days in the following solution:

Acetate of potash	90
Glycerin	180
Water	300

After which it is mounted in a fresh solution of the last formula.

The jars (see cuts) are from E. B. Meyrowitz of New York city. Dr. Thomson has not been in the habit of sealing the jars, finding that with glycerin preparation air bubbles are not apt to appear. The advantages of the method are as follows: It preserves the color and gives proper transparency to the cornea and lens and the specimen can be removed from the jar at any time and a section made, although these are not as satisfactory as fresh sections, on account of the shrinkage which the glycerin causes; it is nevertheless possible to make them,

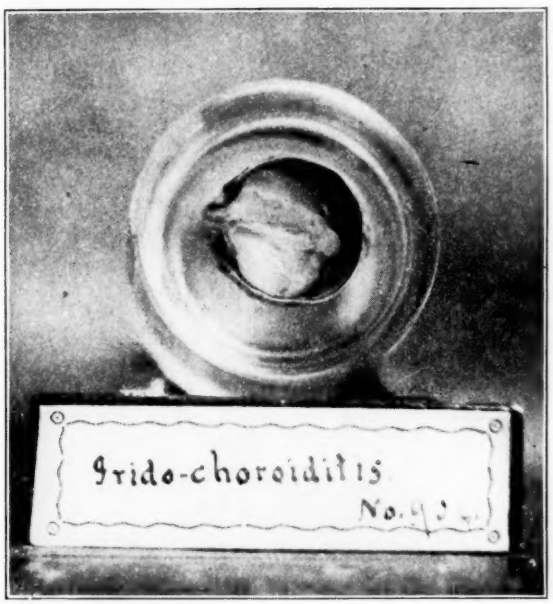

Fig. 6.—The specimen on the block for exhibition (Thomson).

which can not always be said of the glycerin-jelly specimens. The method is simple, and specimens prepared three years ago have kept very well.

Dr. E. V. L. Brown (Illinois Eye and Ear Infirmary) describes "The Technic and Advantages of the Greeff Method of Mounting Macroscopic Eye Preparations" as follows. One needs, in addition to the glass jar shown in the accompanying cut, the following:

1. A 3 per cent. formalin or Kaiserling solution.

2. Some gelatin glue. Dissolve three or four strips of ordinary cooking gelatin in an equal bulk of water and boil until the mass is thick and tenacious. It is then ready for use. On cooling, the solidified mass may be preserved for future use by adding a little alcohol; heat will promptly liquefy it.

3. Some shellac or japanner's gold size; "liquid glass" to seal the cover. The gelatin glue will answer this purpose very well unless the mount is to be sent through the mails.

The technic is not difficult. Carefully dry the half or one-third section of the eye, lay the jar on its side, put a drop of the gelatin glue inside, and place the

3. English readers will find a good translation of this little book by Hugh Walker, published by Blakiston, 1902, entitled "A Guide to the Microscopic Examination of the Eye."

specimen in position. Allow the glue to harden for fifteen minutes; place the jar upright, fill it with the solution and seal the cover. A small clasp may now be glued to the cover to carry a label or photograph.

The advantages of this method, especially over the Priestley Smith method so generally used in past years, are obvious, namely:

1. The Greeff method is quicker. It takes several days to prepare the gelatin, mount the eye and allow the jelly to harden according to the Priestley Smith method. The writer has mounted as many as twenty eyes by the Greeff method in a single morning.

2. The method is simpler and the mount more permanent. A good clear gelatin of the right consistency which will retain its solidity in hot weather is difficult to obtain.

3. It is cheaper by two-thirds. The Greeff jars may be had of E. Leitz, 34 S. Clark street, Chicago, for 10 cents each. The Priestley Smith jar costs 30 cents,

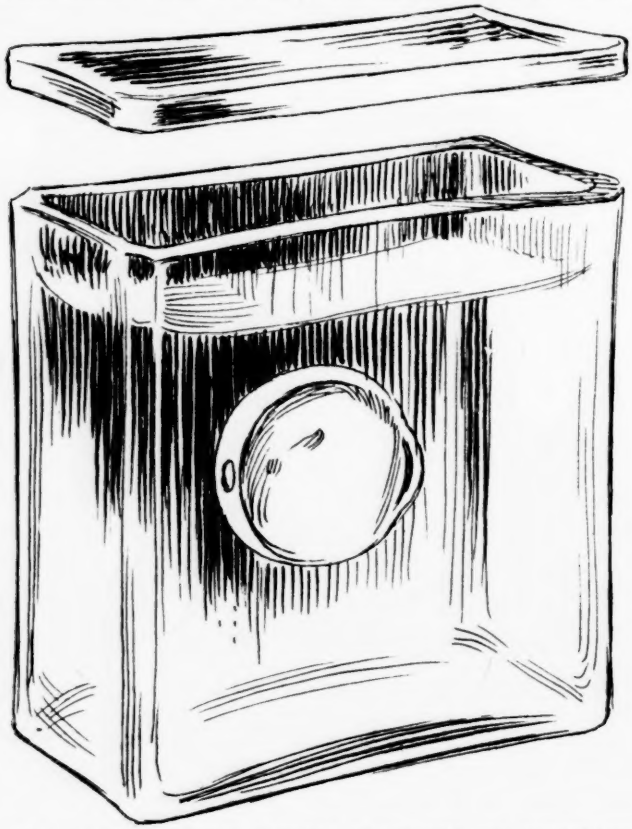

Fig. 7.—Glass jar for mounting macroscopic eye preparations after the Greeff method (E. V. L. Brown).

while good gelatin costs a dollar a package; on the other hand, formalin or Kaiserling solutions are always on hand and inexpensive.

4. The Greeff mount may be kept on a shelf exposed to the light indefinitely, while any gelatin mass will discolor in time.

5. Eyes preserved in formalin or Kaiserling are easier to embed and section for subsequent microscopic study, should this be at any time desired.

Dr. Edward A. Shumway (William Pepper Laboratory, University of Pennsylvania) uses the gelatin mount, as a rule, when it is desirable to make a macroscopic preparation. The gelatin is made in a rather stronger solution than is usually advised—40 grams of gelatin (Coignet et Cie, France, or Conte Fils, Magdeburg, Germany) to 250 c.c. of water. After solution of the gelatin by careful warming, the white of one egg, beaten up in a small quantity of water, is added to the solution, and the whole poured into an agateware pail. This is then placed in an Arnold sterilizer, and boiled vigorously. In this manner the coagulation of the albumin and the clearing of the gelatin are accomplished without danger of burning the gelatin, a very important point, as the least scorching of the vessel around the top of the gelatin will give a brownish discoloration to the mounting medium. It is then filtered through a good quality of filter paper, preferably in a hot water filter, as the percentage of gelatin is very high, and the solution filters slowly. If it stiffens before filtration is complete, it may be put back into the sterilizer again, in the agate vessel, and reheated. To the filtrate an equal quantity of glycerin (C. P.) is added, and 1 c.c. of a 2 per cent. solution of commercial formalin (making a dilution of about 1/20,000, which is strong enough to prevent the growth of molds, etc.). The cups are furnished by Wall & Ochs, 1716 Chestnut street, Philadelphia. (See Fig. 8.)

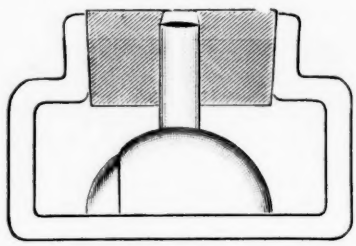

Fig. 8.—Cup, with rounded bases of ebonized wood, for macroscopic specimens.

After the gelatin has hardened over the surface of the specimen in the cup it is exposed to the fumes of strong formalin in a covered glass jar, by means of which the surface is hardened to a depth of one-quarter inch.

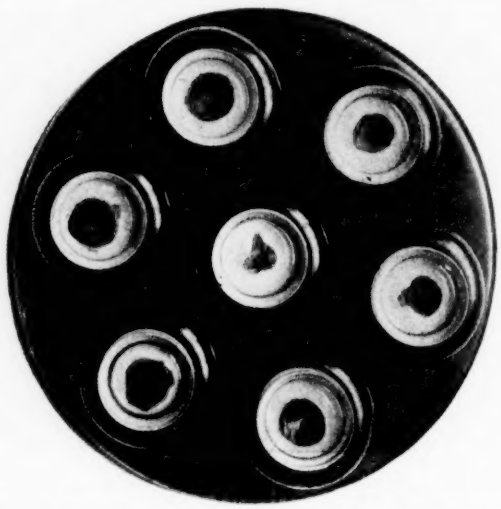

Fig. 9.—A convenient arrangement for exhibition of macroscopic specimens in the class room, or society meeting. It is composed of a round tray of ebonized wood, to which seven of the wooden bases, used for holding the individual specimens, are screwed. It is made by Wall & Ochs, Philadelphia.

This prevents melting of the surface gelatin, and if, in addition, the cups are inverted, in warm weather, the specimens will rarely be affected. After 24 hours the specimen is removed and allowed to stand under a covered dish several days, and the water which is squeezed out of the shrinking gelatin in the form of drops, over the surface, is removed by filter paper. The cup is then sealed. For this purpose opal glass is used, as it is much cheaper than the "flashed glass," and affords a

better background than transparent glass. The most satisfactory cement I have used is the Imperial Rubber Cement, made by S. C. Moffett, New York, which must be melted in a flame before it is applied, and renders the removal of the disc impossible, unless it is again heated. The danger of evaporation may be further prevented by covering the edge with a ring of asphalt.

Drs. H. V. Würdemann and Nelson M. Black of Mil-

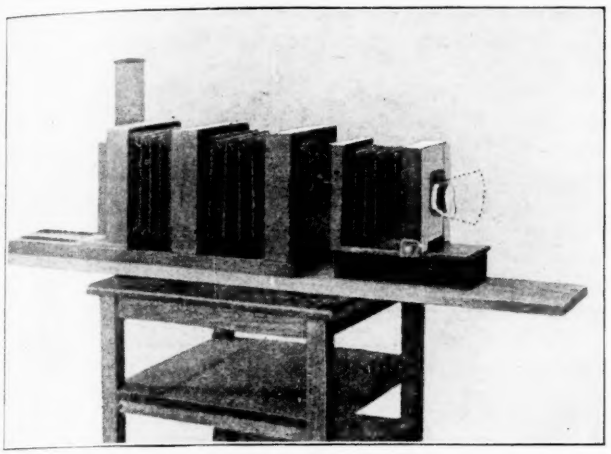

Fig. 10.—The Dixon camera for photographing gelatin-mounted eye specimens.

waukee report that, in their opinion, the two methods of mounting macroscopic eye specimens which seem to give best satisfaction are the glycerin-jelly and the formalin mounting of Greeff. The former has the advantage of being easier to transport without displacing the specimen, but the gelatin has a tendency to become discolored and the preparation of the mount consumes a great deal of time. The Greeff mounting is

Fig. 11.—Secondary hemorrhagic glaucoma (Bull). Photograph.

much more effective in appearance, is easier to prepare, can be photographed with much better result, and microscopic specimens can be removed from them at any time, but it has the disadvantage of not standing transportation well.

The following method was first described by Würdemann:[1]

The specimens are first placed in formalin solution (1/10) for 48 hours, then washed with water and hardened in alcohol, beginning with a 33 per cent. solution,

1. Annals of Ophthalmology, p. 674, October, 1897.

remaining a day each in 33, 50, 70 and 80 per cent. solution, respectively, and are kept in the last strength until ready to divide. The eye is then frozen, cut and mounted in glycerin jelly or preserved in a 4 per cent. formalin solution after Greeff's method; or Kaiserling's

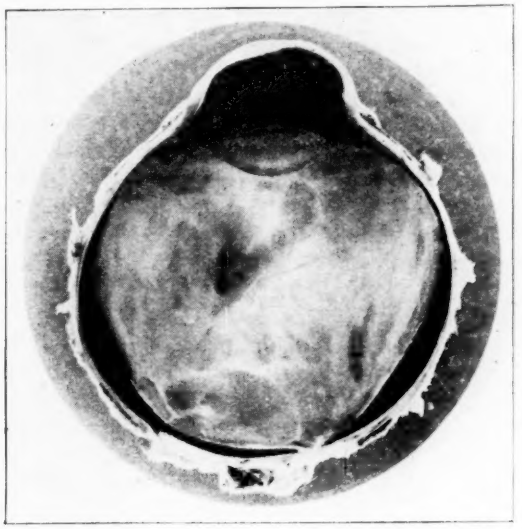

Fig. 12.—Anterior staphyloma following ulcer of the cornea (Derby). Photograph of mount.

solution may be used to preserve them in the jar devised by Brown.

Glycerin jelly is prepared by taking 30 gm. of best gelatin (Gold Label, American; Coignet et Cie, France; or Conte Fils, Germany), adding 240 c.c. of distilled water and heating over a water bath. The whites and shells of two white-shelled eggs, or a small amount of Merck's egg albumin, is added and con-

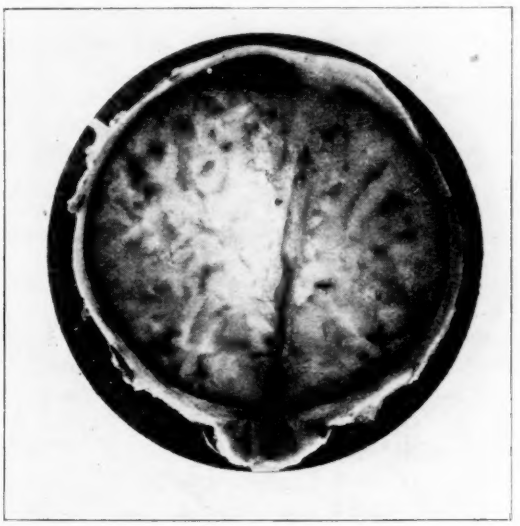

Fig. 13.—Chronic iridochoroiditis following injury twenty years previously (Bull). Photograph of mount.

stantly stirred until the coagulated albumin rises to the top, leaving a clear liquid underneath. Filter through two thicknesses of good filter paper, add an equal volume of C. P. glycerin, 10 c.c. of a 10 per cent. solution of carbolic acid being added to each liter of the jelly to preserve it. The jelly itself is melted by placing the container in hot water, when ready for mounting. The specimens are mounted in small glass jars obtained from Chambers, Inskeep & Co., Chicago. After mounting, the jelly is exposed to the fumes of formalin under a

bell-jar for 48 hours. The glass covers are cemented in place with Freese's cementine, Royal or Le Page's liquid glue.

PHOTOGRAPHING MACROSCOPIC EYE PREPARATIONS.

After an eyeball section has been so successfully preserved and mounted that gross alterations in its tissues are readily distinguished, the question of drawing, photographing or otherwise picturing it naturally arises. Reproduction by photography is, on the whole, the most desirable and most satisfactory method. Dr. George S. Dixon[5] has, among others, discussed its merits as well as its principal difficulties, and, at the request of the committee, has kindly forwarded a number of photographs of gelatin mounts exhibited by him at the New Orleans meeting. Several of these are pictured in the text.

A few trials convinced Dixon that photography of the gelatin-mounted specimens was not as simple as it appeared. The chief obstacle to be overcome was the light reflections from the surface of the glass cup. These produced a good picture of the glass cup, but a very poor one of the mounted specimen. After many experiments it was found that when an ordinary 3½-inch focusing glass, mounted in a metal tube, was placed

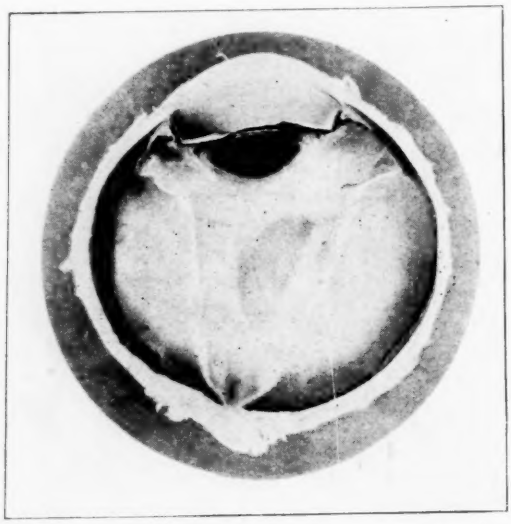

Fig. 14.—Plastic choroiditis (Weeks). Photograph of mount.

over the mount, all direct rays from the surface were excluded, while the eye specimen itself was sufficiently illuminated by light entering the glass sides of the cup. Finally an apparatus was devised which Dr. Dixon regards as the best means of obtaining plates of gelatin mounts. As seen in the figure, it consists of a pair of bellows, the anterior, a single one, being smaller than the posterior. The latter is double and carries the lens and plateholder.

This posterior bellows is securely fastened to a baseboard long enough to project considerably beyond the anterior bellows. The baseboard of the anterior bellows is fastened to a couple of cleats sufficiently high to bring the diaphragm at the back and the object in front, in the optical axis of the lens. Two smaller cleats are screwed to the long baseboard in such a manner as to allow the smaller bellows to be moved backward and forward without lateral motion, independent extension of the bellows on its own baseboard being retained.

The anterior bellows is fitted with a sliding front, in the center of which is a diaphragm sufficiently large for all specimens, varying sizes being supplied with changeable diaphragms of diameters slightly less than the interior of the macroscopic cup, for the purpose of cutting off the direct rays which would otherwise pass through the rim of the cup. This point is essential. A spring is employed to hold the cup in position. As the front slides, it can be removed from the bellows, the object adjusted as desired, and the whole returned to

Fig. 15.—Melanosarcoma of the choroid (Noyes). Photograph of mount.

position, when the specimen will be in the optical axis of the apparatus.

The posterior bellows is fitted with a 3¾-inch Gundlach wide-angle lens intended to cover a lantern slide plate, and capable of enlarging an image the size of an eye two diameters with satisfactory detail; an F 32 stop should be employed during exposure.

A wide-angle short-focus Morrison lens, giving an extreme amplification of 2.6 without "breaking," is a

Fig. 16.—Melanosarcoma of the eviscerated globe (Hunter). Photograph of mount.

trifle more satisfactory, but the Gundlach lens answers the purpose fairly well, as over two diameters is seldom desirable.

In the early work with this camera, diffused daylight, preferably in the open air, was employed. The camera as it stands in the cut is in position for exposure. It was soon learned, however, that this method would only

5. New York Eye and Ear Infirmary Reports, 1889.

answer for a limited number of specimens, namely, those presenting a white or a very light substance in the interior of the hemisphere.

Specimens filled with dark tumors, or those in which nothing remained in the interior but retina and choroid, yielded negatives with no detail whatever in the center until the cornea and sclerotic, transparent and white, respectively, were hopelessly over-exposed. To obviate this a white bristol-board truncated cone, with an angle sufficient to throw the rays under the specimen near the center, was placed arouud the cup, as shown by the dotted lines in the cut. In this instance, instead of diffused daylight, sunlight was reflected into the cone by means of a mirror. Some specimens gave good plates with this method of illumination, but the danger of over-exposing the cornea and sclerotic still remained, and an old difficulty reappeared, namely, the imperfections of the surface of the cup. But the increase in the obliquity of light brought out all the scratches on the surface of the cup, especially if a trifle over-exposed. This in turn was reduced to a minimum by cementing a perfect glass disc to the anterior surface of the cup by means of Canada balsam.

In working with direct sunlight, or the electric arc, it is important to remember that glycerin jelly becomes liquid at a temperature of 105 F.

In many instances the cornea is so transparent, and the sclerotic so white, as to require more contrast than is afforded by the porcelainized glass disc with which our mounts are sealed. This is met by supplying backgrounds made of colored papers such as black, pea-green, a rather dull canary, and neutral gray. Of these, the latter color was most useful. The canary-colored background works well in some cases where it is desirable to "hold back" the sclera, but it is liable to interfere with a transparent cornea.

Color screens have not given any useful results in Dr. Dixon's hands.

On the whole, the most satisfactory plates used were Corbutt's A and B, which require exposures varying from three to twenty-five minutes, depending on the quality of the light, size of stop and character of specimen, as in all other photography.

The method is still imperfect, as will be seen. No single method of illumination yet tried has answered for all specimens, and the color of some is such as to defy all efforts with or without color screens, with different colored backgrounds, with diffused daylight, direct sunlight, or the electric arc.

Other methods are in process of application, the most promising of which is an annular prism at the base of the cup with or without the use of the truncated cone.

TUMORS OF THE CONJUNCTIVA.

ILLUSTRATED BY THE PRESENT EXHIBIT OF MORBID GROWTHS.*

EDWARD ADAMS SHUMWAY, B.S., M.D.
PHILADELPHIA.

In response to the request of the Chairman of your Committee on Exhibit of Pathologic Preparations for a paper on some points in the pathology of the eye, as illustrated by our exhibit of the present year, it occurred to me that it would be well to confine myself within the limits of a comparatively narrow subject, and I have therefore attempted to make a résumé of our knowledge of tumors of the conjunctiva. With this aim in view I have obtained a number of preparations showing the various growths which are found on this membrane, and I desire at this time to express my thanks to the gentlemen who have assisted me by loaning sections and mounted specimens from their collections, especially to Drs. G. E. de Schweinitz, Clarence A. Veasey, William Campbell Posey and L. Webster Fox, of Philadelphia; John E. Weeks, Peter A. Callan, Wilbur Marple, Emil Gruening and Edgar S. Thomson, of New York; Dr. Flemming Carrow, of Ann Arbor, and Dr. Brown Pusey, of Chicago. Many of the cases have already been reported, and others will be published in detail at a later time.

The growths of the conjunctiva are of considerable interest, pathologically, because of their great variety, although they are, relatively speaking, infrequent, and constitute only a small proportion of the cases which we see clinically. The conjunctiva may be the primary seat of the growth, or it may be secondarily involved by extension from the neighboring tissues. I shall limit myself to those tumors which originate primarily in the conjunctiva. They may be divided into two main classes: (*a*) Malignant; (*b*) benign.

The malignant growths are represented by carcinoma and sarcoma. They appear clinically in very much the same forms and in patients usually beyond the fortieth year of life. Their point of predilection is at the corneo-scleral limbus, and it is often impossible to distinguish them, except by microscopic examination. The growth of carcinoma at the limbus has been said to correspond with its occurrence elsewhere in the body at the junction of epithelial surfaces of dissimilar structure. The difference at this point between the conjunctival and corneal epithelium is not marked, however, and the etiologic factor is rather the occurrence of true papillæ in the conjunctiva surrounding the limbus, varying from four to thirteen in number, which, as Nakagawa[1] has recently shown, become deeper in old people, and take on a sudden and enormous growth in beginning carcinoma. The carcinomatous growths appear first as small, pale reddish masses, which have but little tendency to spread inward, both cornea and sclera acting as very resistant checks; so they grow superficially, although rare cases have been described in which there was an inclination to extend inward from the start. In contrast to some of the benign epithelial growths, especially papillomas, they have no tendency to the formation of a pedicle, but possess a broad base, and are closely united to the underlying tissues.

The tumors consist of proliferating masses of epithelial cells, which develop directly from the surface epithelium and are separated into alveoli by a connective tissue stroma which is an extension of the connective tissue of the sclera and cornea. The behavior of the surface epithelium is at once a characteristic difference between carcinoma and sarcoma. In the former it is directly involved, while in the latter it passes smoothly over the surface of the growth, which raises it from the structures beneath as it extends. As a rule, carcinoma grows very slowly, but in some cases it forms large, fungous masses on the surface of the eyeball, the microscopic structure of which resembles papilloma very closely, and the examination of superficial portions of the tumor may lead to a very erroneous diagnosis. If allowed to remain, all of the carcinomas will ultimately perforate the eyeball, usually along the vessels and nerves at their point of penetration through the sclera. In

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

1. Nakagawa: Archiv f. Augenheilk., March, 1903.

some cases there is a distinct pigmentation of the stroma, so that a number of cases of melanocarcinoma of the corneoscleral limbus have been reported. Panas,[2] in fact, considered melanosarcoma to be the exception and melanocarcinoma to be the rule.

The question of malignancy is difficult to determine. The rapidity of growth may vary greatly; likewise the involvement of the cornea and sclera. Even superficial growths tend to recur, and while the extension by metastasis is rare, they should be thoroughly removed and the eyeball sacrificed, if it is evidently involved. Our collection shows a number of very good examples of carcinoma—some small and superficial, some showing tall fungous masses, and others extensive infiltration of the cornea and sclera.

SARCOMA.

Sarcoma, like carcinoma, occurs in individuals usually beyond middle life, and most frequently at the corneoscleral limbus. As a rule, the growths are pigmented, the pigment occurring both in the tumor cells, and in the connective tissue stroma, in which the cells are imbedded. As in the case of melanosarcomas of the skin, the conjunctival sarcomas develop chiefly from the pigmented nevi—the so-called pigment spots—on the conjunctiva, and, as Wintersteiner has shown, usually in the area corresponding to the palpebral opening, probably as the result of repeated slight traumatisms. The study of these pigmented nevi, or melanomas, is of importance, therefore, for the correct interpretation of some of the facts concerning sarcomas. Their structure corresponds closely to that of the skin nevi: circumscribed collections of large polygonal cells which are imbedded in a groundwork of subconjunctival tissue. The question as to the origin of these cells has been, and still is, a matter of dispute. On the skin Unna,[3] Kromayer[4] and others have held that they are derived from the surface epithelium, although the direct connection can not always be shown, while Ziegler[5] believes that they are due to the proliferation of the endothelial cells of the lymph vessels. Wintersteiner[6] was unable to find any confirmation of Unna's theory in so far as it related to the conjunctival nevi; on the other hand, as has been mentioned in speaking of carcinoma, Panas[7] long considered that these epibulbar growths were practically all carcinomas, although in a subsequent article he modified his claims and admitted that many were probably alveolar sarcomas, or endotheliomas, and thought that epitheliomas and sarcomas occurred together. In all of the nevi the epithelium is changed, often thinned, but many times it sends processes of cells downward into the tissue. These processes may be replaced by hollow, gland-like tubes, which may be so numerous as to give the growth a glandular or adenomatous appearance—nevus pigmentosus glandulosus. Cysts may often develop from the glandular formations, and may reach a large size and cause the nevus to atrophy by pressure—nevus pigmentosus cysticus. I have been able to secure several good cases of nevus of the conjunctiva, two of them cases studied by Wintersteiner and one loaned by Dr L Webster Fox, in which the overgrowth of the epithelium and the cyst formation are so marked as to overshadow the original growth of nevus.

From these pigment spots the sarcomas develop slowly into soft, vascular growths, which are usually more prominent than the carcinomas, and occasionally possess a pedicle. When they project over the surface of the cornea they are not ordinarily attached to it, but may be lifted away by means of a probe. Laterally, they are more firmly attached to the bulbar conjunctiva, but can usually be moved freely over the surface of the sclera. If they are not removed they continue to grow, and may reach a large size. In the majority of cases the cornea and sclera offer a remarkable resistance to invasion, and very few cases have been reported in which the tumor had invaded the interior of the eye. At times several nodules may appear at the limbus, or secondary nodules may spring up on the lids (Wadsworth and Verhoeff[8]). Recurrence after removal is very frequent, and may take place in the same position, or at a different portion of the limbus. They are commonly said to be less malignant than sarcomas occurring elsewhere, and Panas[7] makes a sharp distinction in this respect between the corneoscleral growths, which he terms "epibulbar," and those occurring at a distance from the limbus, which he calls "peribulbar." Verhoeff and Loring,[9] however, have shown that while the direct involvement of the eyeball is rare, there is a history of recurrence in 81.8 per cent. of the cases in which the patients were subsequently observed, local metastasis in 23 per cent., and general metastasis in 11 per cent. They therefore consider that epibulbar sarcomas are highly malignant, and believe the eyeball should be at once removed, if the patient's consent can be obtained.

Microscopically, the tumor consists of closely packed, spindle-shaped cells, running in definite bundles, or, more frequently, the cells are arranged in distinct alveoli, separated by a connective tissue stroma, and constitute the so-called alveolar sarcoma. In the latter case the cells may be spindle-shaped, but in many they show large, flat forms, which are epithelioid or endothelial in type. The growths are, however, to be distinguished from carcinomas by the absence of any involvement of the surface epithelium. These growths are well represented in the collection of this year. Some possess spindle-shaped cells; others show the epithelioid type.

Primary sarcoma of the conjunctiva of the lids is very rare, although the lid conjunctiva may be involved by implantation or recurrence of an epibulbar growth. Cases of lymphosarcoma of the plica semilunaris and of the fornix have been described as rarities. Lymphoma of the conjunctiva has been found in malignant lymphoma, with general involvement of the lymph glands of the body, and apparently as the first symptom in some instances. Very marked hypertrophy of the adenoid tissue of the conjunctiva, in the transition folds, with the formation of large tumor masses, which may cover the eye and make the opening of the lids difficult, occurs in the condition known as amyloid degeneration of the conjunctiva. Microscopic examination shows, in the beginning stages, great increase of the adenoid cells and the subsequent formation of amorphous masses, which in some instances give the reaction for amyloid, in others for hyaline. Dr. Weeks has loaned a slide which shows amyloid reaction on the surface of such a conjunctival growth, and I am able to exhibit a lymphosarcoma of the transition fold.

Carcinoma and sarcoma occur occasionally as primary growths on the caruncle, and show here much the same

2. Panas: Traité des Maladies des Yeux, Paris, 1894.
3. Unna: Berlin. klin. Wochenschr., 1893, and Virchow's Archiv, vol. 143, 1896.
4. Kromayer: Beiträge v. Ziegler, xxii, 1897.
5. Ziegler: Lehrbuch der Allgemeinen Pathologie und der patholog. Anatomie.
6. Wintersteiner: Ber. der ophth. Gesellschaft, Heidelberg, 1898, p. 253.
7. Panas: Archives d'Ophtalmologie, January, 1902.
8. Wadsworth and Verhoeff: Trans. Am. Ophth. Soc., 1901, p. 274.
9. Verhoeff and Loring: Archives of Ophthalmology, March, 1903.

characteristics as on the skin surface. Carcinoma has much greater tendency to form "pearly bodies" in this position than on the conjunctiva. A good case of primary carcinoma of the caruncle has been loaned by Dr. de Schweinitz,[10] and one of primary sarcoma by Dr. Veasey.[11]

The benign growths of the conjunctiva are either congenital or acquired. The congenital forms are sessile, while the acquired forms are usually polypoid in shape, and possess a pedicle. By far the most frequent of the congenital growths are the

DERMOID TUMORS.

Dermoid tumors form flat, dull white growths of firm consistency, usually situated at the corneoscleral junction, on the temporal side, and quite firmly attached to the cornea and sclera. The surface is often dry and may be covered with fine hairs, or, more rarely, with a few long hairs which irritate the eye by their presence. Microscopically, they represent small islands of skin. The epithelium is thickened, cutaneous in character, and covers a mass composed of dense connective tissue, in which hair bulbs, sebaceous glands and sweat glands may be imbedded. Frequently associated with other congenital anomalies, such as coloboma of the lid, they may take on a sudden, rapid growth in later life, and should be carefully removed. Most of the later writers assume a temporary attachment of the amnion to the eyeball during fetal life as the explanation of their origin. A number of such growths are included in the collection.

LIPOMA.

More rarely, subconjunctival lipomas occur beneath the bulbar conjunctiva. They appear as yellowish masses, situated generally in the outer angle of the eye, between the insertions of the external and superior rectus. Microscopically, they consist of lobules of fat, sometimes associated with considerable fibrous tissue. They frequently contain gland tissue, and as they are congenital, may be more properly termed dermolipomas. Some authors have contended that teratoid elements are always present, although they are easily overlooked. A number of cases, however, have been carefully studied in serial sections, and have proved to be pure lipomas. Occasionally they grow to a considerable size at puberty. They can be removed without difficulty, and show no tendency to recur. Two of these growths have been secured.

OSTEOMA.

As rare congenital tumors, about twelve cases of subconjunctival osteoma have been reported. These have been situated usually in the supero-external portion of the eyeball, which is also the position in which the lipomas are most frequently found. They represent small pieces of true osseous tissue, with lacunæ, bone corpuscles, etc., and are best explained as the result of a temporary adhesion of the amnion to the eyeball, and the subsequent development of bone in the tissue thus formed. They are illustrated by one specimen.

Lymphangiomas and telangiectasias have also been described as very rare congenital growths.

The acquired forms of benign growths are, in the majority of cases, polypoid in form. In the older textbooks all tumors of the conjunctiva which had a distinct pedicle were called polyps. Under this term, however, many different forms were included, and we now know that both soft and hard fibroma, adenoma, papilloma, granuloma, angiosarcoma, and even tubercular conditions, may assume a polypoid appearance, as a result, probably, of the constant movements of the eyelids. As Elschnig[12] states, true polyps, in the strict anatomic sense of the term, i. e., hyperplastic growths of circumscribed portions of the conjunctiva, which include all of its elements, such as are found in the nose, esophagus, intestines, etc., have never been described on the conjunctiva. The term polyp, however, is used by many writers to describe also the soft, edematous fibromas or fibromyxomas which occur in the nose, and although it would seem best, as Axenfeld[13] says, to drop the term altogether, if we are to use an anatomic classification, such good authorities as Fuchs[14] and Panas[2] make a separate class of polyps, and the name may be retained and used to designate the fibromas of the conjunctiva.

FIBROMA.

Fibromas are represented by two forms, soft and hard. The soft fibromas occur chiefly in the fornix, or in the palpebral conjunctiva, grow quite rapidly and possess long pedicles. They are composed of parallel bundles of spindle cells in a finely fibrillar tissue, and often contain many blood vessels. The presence of these vessels is the cause of a characteristic symptom that is often observed in connection with the soft fibromas, viz., severe bleeding on the slightest traumatism. Removal and cauterization of the base with nitrate of silver, or with the actual cautery, usually prevent any recurrence. Less frequent are the hard fibromas, which arise chiefly from the palpebral conjunctiva and from the caruncle. Their surface is smooth and covered with a thin layer of epithelium. The histologic structure is that of fibrous connective tissue, with comparatively few cells and blood vessels. They cause no inconvenience unless large, and when removed have no tendency to recur.

GRANULOMA.

Quite closely related to the soft fibromas are the granulomas which develop in places where a superficial loss of conjunctival tissue has existed, most frequently after tenotomies and enucleations, and also after rupture of chalazia on the internal surface of the lid. They are composed of naked masses of pure granulation tissue: closely packed polynuclear cells in a fine reticulum, which contain numerous capillary blood vessels. There is no epithelial covering, and the little growths may be snipped off, or, if left alone, will finally be constricted off by the contraction of the conjunctival tissue surrounding their base.

The fibromas must also be distinguished from the small growths on the tarsal conjunctiva and about the limbus in spring catarrh. These present themselves in the form of broad, flattened papillæ, which have been likened to paving stones, and while they can not strictly be included among tumors of the conjunctiva, as they occur in the course of an inflammatory process and disappear without leaving any trace, they nevertheless resemble the fibromas very closely in their histologic structure. They consist of dense fibrous connective tissue, the fibers of which may show a peculiar glassy degeneration, and are covered with a thickened layer of epithelium, which, especially in the circumcorneal growths, shows a marked tendency to send invaginating processes of cells into the depth of the tissue, so that the appearance is very similar to that found in cancroid.

10. de Schweinitz: Trans. Am. Ophth. Soc., 1898, p. 324.
11. Veasey: Archives of Ophthalmology, xxvi, No. 2, 1897.
12. Elschnig: Archiv f. Augenheilk., vol. xix, 1889, p. 64.
13. Axenfeld: Ergebnisse der allg. Path. u. patholog. Anatomie von Lubarsch-Ostertag, vol. ii, p. 38.
14. Fuchs: Lehrbuch der Augenheilk., 7th ed., p. 140.

Fibromas are represented by sections loaned by Drs. Weeks and Thomson. There are a number of sections of granuloma, and Drs. Posey and de Schweinitz have sent sections of tarsal growths in spring catarrh.

PAPILLOMA.

Another form of polypoid tumor of still greater importance is papilloma, or papillary fibroma. Elschnig,[12] in his very excellent article, stated that this was comparatively infrequent, but the subsequent papers by S. Fuchs,[15] Wagenmann,[16] Lagrange,[17] Zimmermann,[18] Grunert,[19] Kopetzky von Rechtperg[20] and others have shown that they are among the most common tumors of the conjunctiva. They form small growths, which may be distinguished clinically from the fibromas by the fact that their surface is not smooth, but is covered with tiny papillæ, like the surface of a raspberry. Frequently multiple, they occur chiefly in the neighborhood of the caruncle and semilunar fold, but also on the tarsal and bulbar conjunctiva, and unless removed very thoroughly show a decided tendency to recur. They are composed of branching papillæ of connective tissue, surrounded by thick mantles of epithelial cells, the preponderance of the epithelial cells showing that it is essentially an epithelial proliferation with which we have to deal. The connective tissue may be so little developed that the epithelial cells are found almost in contact with the walls of the capillary vessels. At times they are low and wart-like, at others they show long, villous processes and have a structure resembling a cluster of feathers. The latter appearance is well shown in two cases in the collection—one a case reported by Ayres of Cincinnati, and one obtained from Mr. Treacher Collins in London. When the papilloma originates on the caruncle, the surface epithelium partakes more of the character of skin epithelium, while on the conjunctiva it frequently contains numerous goblet cells. A number of very excellent specimens in the collection testify to the comparative frequency of the growth. The question as to their malignancy is often difficult to determine. When situated on the conjunctiva near the limbus they may be mistaken for an early stage of carcinoma, but on the other hand, while usually benign, they do unquestionably show at times a tendency to undergo carcinomatous degeneration and involve the tissues of the eyeball and lid, as cases by Horner,[21] Lagrange and Mazet,[22] Kopetzky von Rechtperg[20] and Risley and Shumway[23] have shown. Their removal should therefore be complete.

ADENOMA.

Adenomas occur occasionally on the eyeball, in the neighborhood of the caruncle, as pale red, isolated tumors, which may possess a pedicle or have a broad attachment. Only five cases have been reported, four of which have had their origin on the caruncle itself, arising from the tubular gland in this position, as in Veasey's[24] case, sections of which he has loaned, while Schirmer's[25] case on the semilunar fold probably developed from a misplaced gland, as there is normally no glandular tissue in this position. On the conjunctival surface of the lids, adenomas have been found originating in Krause's glands, at the border of the tarsal cartilage in the meibomian glands, and in the modified sweat glands of Moll. At times they show by their rapid growth and involvement of the surrounding structures that they are essentially malignant, or adenocarcinomas. The greater number of such cases originate in the meibomian glands, and show alveoli of large epithelial cells, which degenerate quickly and form large, poorly-staining masses in the center of the alveoli, as illustrated by two cases in the exhibit, one of which was loaned by Dr. Thomson of New York. Of course, these growths are not really conjunctival tumors, but since they may appear as tumors on the conjunctival surface of the lid, they must be mentioned for the purpose of differential diagnosis.

HEMANGIOMA.

Fifty-two cases of hemangioma have been collected by Pergens.[26] They consist of newly-formed capillary vessels, and should be sharply distinguished from varices and aneurisms. If they contain much fibrous tissue they may be termed angiofibromas, and are then closely related to the vascular fibromas. They may be congenital or develop in later life, and occur as primary growths on the palpebral conjunctiva, in the fornix, on the bulbar conjunctiva and plica semilunaris, as round, polypoid and occasionally sausage-shaped growths, the surface of which is sometimes smooth and sometimes nodular. They may remain stationary; at times they grow slowly, at others rapidly, without any apparent cause. When combined with sarcoma, the angiomatous formation is of secondary importance, and their course depends on the sarcomatous character of the tumor. Their histologic structure consists of twisted capillary vessels, which may also be dilated. If large blood cavities are present, we have cavernous angiomas, which are more rare. In their treatment the best results have been obtained by excision.

CYSTS.

Finally, as comparatively rare forms of new growths, we have the cysts of the conjunctiva. These develop in three chief places: on the bulbar conjunctiva, in the fornix and on the palpebral conjunctiva, in the form of transparent vesicles filled with a clear, serous fluid. Those of the bulbar conjunctiva represent usually small dilatations of the lymph vessels, and are hence lymphangiectasias or lymphangiomas. They occur in the neighborhood of the cornea, and are generally multiple, like strings of small, transparent pearls. Sometimes they communicate with each other, and more rarely they form isolated, yellowish cysts, which, however, remain comparatively small, and are thus to be differentiated from the cysts which originate in the conjunctival glands. Very rarely cysts on the bulbar conjunctiva develop from invaginated processes of epithelial cells. These processes, first described by Henle[27] and later by Iwanoff[28] as true glands of the conjunctiva, and known as Henle's glands, are now considered to be, as a rule, folds of the conjunctiva which are lined with epithelium. They are very frequent in chronic catarrh, and especially in trachoma. If the opening of these minute gland-like depressions becomes closed, there may be retention of the secretion from the cells and the formation of cysts. Cysts also originate in the head of the pterygia, by the same process of invagination of the surface epithelium, and subsequent isolation of the cells from the surface. A few cases have been reported of the introduction by

15. S. Fuchs: Archiv f. Augenheilk., vol. xx, 1889.
16. Wagenmann: v. Graefe's Archiv, vol. xl, p. 2, 1894.
17. Lagrange: Archives d'Opht., April, 1899.
18. Zimmermann: Klin. Monatsbl. f. Augenheilk., vol. xxxii, 1894, p. 371.
19. Grunert: Klin. Monatsbl. f. Augenheilk., April, 1899.
20. Kopetzky v. Rechtperg: v. Graefe's Archiv, vol. li, p. 115.
21. Horner: Zehender's Monatsbl. f. Augenheilk., vol. ix, 1871.
22. Lagrange and Mazet: Annales d'Oculistique, vol. cxix, 1898.
23. Risley and Shumway: Annals of Ophthalmology, July, 1901.
24. Veasey: Annals of Ophthalmology, July, 1902.
25. Schirmer: v. Graefe's Archiv, vol. xxxvii, i, p. 218.
26. Pergens: Klin. Monatsbl. f. Augenheilk., vol. xxxix, January, 1901.
27. Henle: Handbuch der Eingeweidelehre des Menschen.
28. Iwanoff: Heidelberger ophthalm. Gesellschaft, 1878.

traumatism of epithelial portions of the skin, cilia, etc., beneath the conjunctiva and the formation of cysts from these included particles.

Cysts of the fornix may arise from the so-called Henle glands, and less frequently from the accessory lachrymal glands, or glands of Krause, in this position. The excretory ducts of these glands, forty-two or more in number, in the upper lid, and from two to six in the lower lid, may be closed by chronic inflammatory processes, and the retained secretion then widens out the ducts into cysts, which may reach considerable size, in contrast to the lymphatic cysts of the bulbar conjunctiva. When the cysts originate in Krause's glands some of the acini of the gland will usually be found in the neighborhood of the cyst, but this is not always the case, and as their size, position and contents are not diagnostic, the determination of their origin may be very difficult.

From these glandular cysts must be distinguished those due to the presence of the cysticercus. These occur in early life, and constitute, according to Ballaban's statistics, one-sixth of the number of cases of ocular cysticercus. They occur frequently as quite large, pale red, or more often whitish or yellowish vesicles, which are usually movable, but are occasionally attached firmly to the sclera, or to an eye muscle. If the wall of the cyst is thin, the embryo may be seen as a white spot within. Histologically, the wall of the cyst is composed of a thick connective tissue capsule lined with several layers of young cells, and the surrounding conjunctiva shows evidences of reaction due to the presence of the foreign body. Within the cyst wall is the characteristic cysticercus bladder projecting from one side. In the glandular cysts, on the other hand, the wall of the cyst is composed of a single, or at most, a double, layer of epithelial cells.

The cysts from the glands of Henle are quite frequent, both in the transition folds and in the palpebral conjunctiva in chronic catarrh, and in trachoma. They have been studied of late, especially by Fuchs[29] and Wintersteiner,[30] who have described concretions within the cysts, which arise either from the altered secretions of the cells lining the cyst walls, or from conglomerated masses of the dead cells themselves. Fuchs believes that in some cases the concrements are masses of actinomycetic threads. The collection contains the section of a large epithelial cyst of the upper fornix, one of subconjunctival cysticercus, and a very good example of cyst formation in old trachoma, with concrements within the cyst cavity.

29. Fuchs: v. Graefe's Archiv, vol. xlvi, 1, p. 103.
30. Wintersteiner: v. Graefe's Archiv, vol. xlvi, 2, p. 324.

Good Lay Advice to Young Physicians.—If your patients were all reasonable men and women, your task would be easy; but they are not. Even in their best estate they are not all reasonable men and women, and you will have to deal with them when they are not in their best estate, but are morbid. You will have to deal with patients who throw your medicine out of the window, and still expect you to cure them; in one house with a mother busy with other things and careless of the sick child; in another house with a mother whose weak and tearful sympathy does much to negative the influence of your presence and the effect of your medicines. It is not enough for you to know physiology and anatomy and therapeutics; not enough for you to know what your medical school has told you; you must know men and women—their physical constitutions, their mental and moral constitutions. You must understand them—their life, their narrownesses, their prejudices, their unreasonablenesses. You must see into them, that you may minister to them.—*The Outlook.*

PARAFFIN INJECTED SUBCUTANEOUSLY FOR THE CORRECTION OF NASAL AND OTHER DEFORMITIES.*

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HISTORY.

"To Dr. J. Leonard Corning of New York belongs the credit of first experimenting along the lines of subcutaneous injection of oils"; and, although applied to an entirely different purpose to that which paraffin is now devoted, yet of much import, since it was demonstrated that sterilized oils could be used subcutaneously, without resultant inflammation. Following this same idea, directed in a different channel, Gersuny of Vienna, in 1900, published an article stating that melted vaselin, when injected into a yielding tissue, forms a small tumor which remains *in situ*, causing no appreciable reaction. He used this method to overcome the deformity resulting from castration, blemishes due to cavities, depressed scars, and also for narrowing orifices.

Drs. Lynch and Heath appear to be the pioneers in America in the use of subcutaneous injection of paraffin for the correction of nasal deformities.

In 1901, I began a series of investigations on the cadaver to ascertain the action of paraffin beneath the skin. Before injecting the paraffin the temperature of the tissues was raised to 99 F., by hot applications, then I injected beneath the skin, on the dorsum of the nose, an amount of paraffin varying from a half to two drams, without exerting any restraining pressure on adjacent tissues. I found that small injections of the paraffin would remain *in situ*, and assume the conformity of the solid parts over which it was injected; but when the larger quantities were used, a portion would force its way into the soft tissues at the inner canthus of the eyes and along the course of the angular veins. This could be prevented by pressure over these areas. It was also demonstrated that an intimate adherence exists between the skin and the lateral cartilages at the tip of the nose, and hence was noted the importance of liberating the tissues between the skin and cartilages at this point before injecting the paraffin in the living subject. Later I injected melted paraffin into the back, ears and nose of a rabbit, without anesthesia, and with slight apparent pain to the animal. Ten days later, the examination of the tissues around the injected paraffin gave no evidence of acute inflammation. There had been some attempt on the part of the tissues to encapsulate the injected mass, but the paraffin itself had undergone no obvious change. Later another injection was made into the peritoneal cavity of a rabbit, and after a 22 days' period the animal was killed. Here no evidence of inflammation was present—not even the formation of adhesions. The mass had moved about the peritoneal cavity and become rounded in shape, and had finally lodged between the liver and diaphragm. From this I concluded that paraffin must be inert if injected into the tissues under proper surgical precautions. The paraffin used in these cases melted at 110 F.

Dr. A. E. Comstock[1] of St. Paul, Minn., has described the results of his experiments with rabbits along the pathologic line of injected paraffin. He demonstrated the changes in the tissue after injections varying from

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. George L. Richards, O. Joachim and G. V. Woollen.

1. On Paraffin, New York Medical Record, Nov. 1, 1902.

2 to 16 weeks, having used paraffin with melting points from 102 to 112 F. In all cases where paraffin was used with a melting point of 102 F., the animal died within 2 weeks from thrombosis. The best results were obtained with paraffin with the higher melting points. From his very careful investigations, he finds that the harder paraffins are not truly encapsulated in the tissues, but become a part of the new tissue. This theory is further borne out by Walker Downie, who injected paraffin into a carcinomatous breast which was subsequently removed, and microscopic sections made and examined.

DEFORMITIES MOST FREQUENTLY PRESENTED FOR CORRECTION BY INJECTION OF PARAFFIN.

1. Saddleback noses.
2. Depressed scars from mastoid operations.
3. Depressed scars from frontal sinus operations.
4. Depressed scars from traumatic injuries.
5. Smallpox pits.

The saddleback nose occupies the most prominent place in this category, and is the one toward which our attention, as specialists, is most generally directed. The causes of saddleback noses may be mentioned in the following order of frequency, according to my experience: 1, Traumatism; 2, syphilis; 3, heredity; 4, abscess; 5, lupus; 6, scrofula.

At least 50 per cent. of my cases have been caused by traumatism.

ADVANTAGES AND DANGERS.

The advantages to be gained by subcutaneous injection of paraffin over any surgical procedure are:

1. The deformity is corrected without a resulting scar, provided no slough or abscess follows, which is a sequence of surgical uncleanliness or hyperinjection.

2. A 2 to 4 per cent. solution of cocain is all the anesthetic necessary, and completely overcomes the pain of inserting the needle, which is all that attends the operation.

3. The slight reaction following the injection is temporary, and the patient may resume his daily pursuits in 12 hours.

4. The results, when proper care has been exercised, are pleasing alike to patient and operator.

The possible dangers that may result are:

1. Abscess or slough, due to either infection or hyperinjection.

2. Embolism.

3. Deformity from hyperinjection.

The first may be obviated by surgical care, and proper attention to the quantity of paraffin injected, so as not to cut off the blood supply to that area.

Embolism is avoided by injecting the paraffin in a semisolid form, and deformity from hyperinjection is entirely under the control of the operator when using a syringe operated by screw force. This last danger is the only one ever coming under my personal observation, and it resulted then from using a piston syringe.

INSTRUMENTS DEVISED FOR INJECTION.

When the injections of paraffin were begun, it was a far more difficult matter to accomplish the desired result than at present. The most potent difficulty was in the syringe. An ordinary serum syringe or an aspirating syringe was all the armamentarium at hand, and the rapidity of action necessary before the hardening of the paraffin in the needle took place, was sometimes detrimental to a good result. This objection was soon obvious, and experiments were made on a syringe which would relieve the necessity for haste. As the dangers of emboli had been harped on by many, I undertook to devise a syringe by which paraffin could be injected in a semisolid form, and to put at rest all the accusations against the advisability of injecting liquid paraffin into the tissues. After a time I succeeded in designing one that would eject paraffin from its needle in a semisolid form, and without the necessity for haste. The syringe which I have devised and here present is thus described: It consists of a metal barrel of 90 minims capacity, and is constructed with a large diameter and short axis, so that dexterity in its manipulation will not be lost by the distance of the hand introducing the needle from the point of introduction. The needle is also short for the same reason, and is just larger than a hypodermic needle. The piston and all other parts being of metal, obviates the necessity of washers, and thereby renders it more capable of sterilization, lessening the danger of sepsis. The piston rod is graduated in minims, and is surrounded by a course screw worm. Fitted on this rod is a metal thumb screw, which runs up and down, and is made to screw into the upper end of the cylinder at the volition of the operator. When this thumb screw is not fitted into the cylinder the piston works up and down as in any other syringe, and any liquid can be drawn up and expelled readily by manipulation of the piston; but when the thumb screw is put into place, it becomes necessary then to screw the piston down, and by so doing the paraffin is slowly ejected from the needle. When the paraffin is semisolid, it winds out

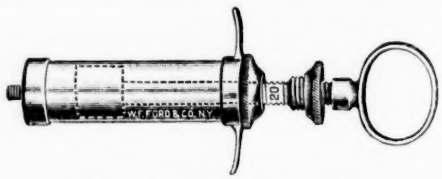

Fig. 1.—The author's syringe.

from the needle in a thin cylindrical thread, but with sufficient force to uplift any tissues not held down by fibrous adhesions. In performing the injection slowly, in this way, ample time is allowed for molding and smoothing the injected paraffin, and the danger of hyperinjection is minimized. The simple mechanical devise which renders the syringe so effective places it at the disposal of any operator, and renders it both portable and free from arrangement other than sterilization.

PARAFFIN EMPLOYED AND ITS METHOD OF PREPARATION.

In my experience, the best results follow the use of a paraffin with a melting point of 110 F. This is not a pure paraffin, but is a mechanical mixture of commercial paraffin, melting at about 120 F., and the addition of petroleum jelly sufficient to bring the melting point down to 110 F. This quantity has to be estimated somewhat carefully, and can not be stated in definite proportions. I have found that while one corner of a plate of paraffin will melt at 120 F., the other will melt at 140 F., so that in having it prepared for use, the chemist makes up a large quantity each time. The melting point must be accurately determined. Test tubes of one-half ounce capacity are filled with the liquid substance, sealed with wax and placed on a sand bath where the temperature is raised to 300 F., thus insuring sterilization.

PREPARATION OF FIELD OF OPERATION AND INSTRUMENTS.

Ordinary surgical technic is all that is to be observed; my routine at the Manhattan Eye and Ear Hospital,

where I have performed most of the operations, and at the office, has been as follows:

1. Scrub the field of operation with green soap and water.
2. Apply alcohol freely.
3. Wipe off with bichlorid solution of 1 to 5000.
4. Pour on a little ether.

The syringe and needle are boiled and then allowed to cool sufficiently for easy manipulation, and the hands are surgically cleansed. At the point of entrance of the needle I usually inject into the epithelial layer of the skin only three to four minims of a 4 per cent. solution of cocain. I believe this does no harm to the tissues, nor is it misleading as to the quantity of paraffin necessary to overcome the deformity, if the solution is just at the point of the needle's entrance into the skin and not beneath it. Some operators prefer a weaker solution. I have in several instances injected the paraffin without any anesthetic, and with but slight pain to the patient, and that only on entrance of the needle. Paget and Walker Downie both use a general anesthetic; but, to my mind, this adds an unnecessary element of danger far greater than the operation itself. To insure still further the sterilization of the paraffin, I have devised a tin receptacle supported on an attached tripod, which raises the bottom an inch from any plane surface on which placed, and closed with a detachable lid. This

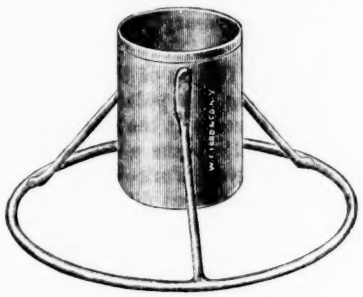

Fig. 2.—The paraffin sterilizer.

arrangement prevents the paraffin from burning and browning. Into this I pour the paraffin, from the test tube, after melting, and place this receptacle into a sterilizer, or any ordinary boiler—surround it almost entirely with water and boil. After I have boiled it for a few minutes, I remove the receptacle and permit it to cool until the paraffin therein is about 120 F. I then draw it up into the syringe which has been sterilized in the same boiler with the paraffin. When sufficient is withdrawn, I evacuate the air bubbles from the syringe by pressing the piston upward, and run my set screw into place. Some two or three minutes are now allowed for the paraffin to assume equal consistency throughout and to cool down to a semisolid state. This may be expedited by placing the syringe in a bowl of sterilized water at 80 F.

Before beginning my injection, I warm the needle of the syringe in some hot sterilized, or even boiling, water, to soften the paraffin which has formed a hard plug in it. This prevents the paraffin from running back of the metal piston, or, as happened in one instance brought to my notice, bursting the needle, when too great force is exerted by means of the screw attachment. Should the paraffin come out in little interrupted spurts of a too liquid nature when the piston rod is revolved, I again cool, warm the needle as before, and continue this routine until the paraffin is ejected in a thin cylindrical thread, easily moldable, and quite impossible of forming an embolus. When the paraffin reaches this consistency it may be kept many hours ready for use, at the temperature of the room, if only the precaution to warm the needle is taken each time before attempting the injection. When this condition is reached, I insert the needle beneath the skin, but above the periosteum, carrying its point slightly beyond the deformity and begin to inject; having the assistant exercise pressure on the soft tissues at inner canthi and on the region of soft tissue at the junction of the nose and forehead. Supporting the syringe with one hand, I mold and smooth the injected paraffin to the requirements of the case, only injecting small quantities at a time, and exercising the greatest care to prevent injecting too much.

In most cases I overcome the deformity at the first injection, but it is by no means advocated, as a rule, and some of the best results have followed three injections. After the first few minims have been injected, I gradually withdraw the needle, making slight additions to the original quantity, and taking every care to mold and smooth the surface, so as to leave the overlying tissues perfectly even.

After withdrawing the needle, I spray the part with ether, which almost immediately hardens the paraffin and insures a better result. The point of entrance of the needle is sealed with collodion and the patient instructed to apply ice cloths for twelve to twenty-four hours. A slight redness generally ensues, somewhat commensurate—in inverse ratio—with the faithfulness with which ice cloths have been kept on. This redness has lasted for a week or ten days in some of my cases, but eventually all disappeared under the application of a 25 per cent. solution of ichthyol.

When the second injection is necessary, I have the patient return in one week, but where circumstances make earlier attention desirable I have not hesitated to make it in three days after the first. The quantity requisite for correcting even a most marked deformity is very small. A dram of paraffin under the skin produces a most astonishing effect, and I believe that, in most instances, a small fraction of a dram is all that is requisite for overcoming ordinary deformities. Since using my syringe, where it can be accurately ascertained just how much is injected, my computations have materially diminished, and I find fifteen to thirty minims is the average amount of injection. Gersuny once injected two ounces in the correction of a deformity of the chest, which represents the maximum amount yet reported. Jukuff found in animals that unpleasant and fatal results occurred only when one-tenth of the bodily weight was used, and in cases where the melting point was below the bodily temperature. From this we may conclude that at present there is no danger to life in the correction of any known deformity. The results obtained are uniformly good, with here and there an unfortunate necrosis, a hyperinjection, or a misplacement, which complications can all be avoided.

CAUSES OF NECROSIS.

1. Surgical uncleanliness.
2. Too much pressure, cutting off blood supply to the part.
3. Injection into the skin and not beneath it.
4. Constitutional disease of patient, as diabetes or Bright's disease.

The hyperinjection may be avoided by the use of syringe, as described, where absolute control of every minim is under the guidance of the operator, and by a little conservatism in attempting to correct the entire deformity at one sitting. The misplacement or lodge-

ment in neighboring parts not intended for the injection, is again the result of a piston syringe, where the needle becomes plugged with paraffin harder than that in the syringe, and on exerting more force this is violently ejected and followed by a volume of liquid paraffin which shoots everywhere beneath the skin and is beyond the control of the assistant or any mechanical device. The most humiliating result is one from hyperinjection or misplacement. The chemical agent that will dissolve out an overplus of paraffin through the skin is not yet within our ken. I have not only been consulted by many unfortunates from other operators' hands, but had a similar result from the use of an aspirating syringe in one of my own cases. An attempt to curette this overplus away through a subcutaneous opening was far from successful. Since then I have obtained better results by cutting away the loose tissue in which the paraffin was imbedded. In one case sent me for correction this method was entirely satisfactory. Here the paraffin had even extended into the soft tissues of the upper eyelid, and its removal occasioned considerable tumefaction, lasting some days. I have never observed any absorption to have taken place in any of my cases, and it has now been two years since the first were begun. No unusual sensations occur over the injected part, except that of numbness immediately following the injection.

Paraffin has been largely employed abroad in filling in the excess of nasal space resulting from atrophic rhinitis. I can not advocate this until further demonstration proves its utility.

SOME OTHER SURGICAL USES OF PARAFFIN.

1. To overcome incontinence of urine.
2. To diminish size of hernial openings.
3. To replace testicles.
4. To cover stumps of amputated bones, preventing wear through flaps.
5. To prevent adhesions in ankylosed joints after first breaking them up.
6. To form plate in trephined skull, preventing dura from adhering.
7. To fill in malformations around neck and in attenuated mammæ.

CASE 1.—W. J. H. No specific history. Injury due to horse's kick when a boy. The nasal bones fractured, septum crumpled and bridge entirely flattened, so that the area between the eyes was entirely flat. In addition a heavy scar ran transversely across this space, from the distal extremity of the right nasal bone to the inner canthus of the left eye. I hesitated at first to attempt operating, but finally decided to do so—aiding the operation by loosening the scar tissue with a spear-headed paracentesis knife subcutaneously inserted. The entrance was perfected under cocain near the tip of the nose, and then carried beneath the skin to the binding scar tissue which I liberated in small quantities. At the same point of entrance I inserted the paraffin needle and followed the line of incision. I raised the tissues quite perceptibly, and no unfavorable results obtained.

Two weeks later I began the same performance, making entrance over the nasal spine. This likewise resulted favorably. A good part of the deformity was now overcome, but I concluded to perfect the operation by a third injection. This time I went in at a point midway between the inner canthus of the left eye and my second incision. In liberating the scar tissue this time I cut too close to the surface, and when I injected the paraffin I noticed the white fibrous tissue was considerably stretched. A few days later the paraffin had worn through a small opening, and the most of the last injection worked out; but either sufficient remained, or new tissue formed to overcome the deformity to the satisfaction of the patient, so that I have not attempted further interference.

CASE 2.—Injury traumatic, operation Oct. 30, 1902. Cocain anesthesia. One injection only was made. Method pursued same as that advocated in paper. Result entirely satisfactory.

44 West Forty-ninth street.

DISCUSSION.

DR. O. JOACHIM, New Orleans—I can support the statements at the end of the paper. In my experience, which is not as large as the Doctor's, I have met the difficulties cited by him in the use of the plain piston syringe. I have seen a case in which there is an objectionable amount of paraffin lodged in the space the Doctor pointed out above the nasal bones. It was due to the paraffin becoming hard and in injecting with some force to overcome the obstructing mass too much was injected. I shall take it out later surgically. The study of this subject has shown that the paraffin of higher melting point becomes encapsulated and the softer paraffin of lower melting point becomes permeated by fibrous tissue. The paraffin I use melts at 104 to 106 degrees. The procedure is a simple one, and to those with a surgical inclination there should be no difficulty in overcoming any abnormality in the shape of the nose or depressed scar after a mastoid operation or after a frontal sinus operation.

DR. J. F. BARNHILL, Indianapolis—Dr. Smith spoke of instances in which injections over the cartilages need to take place and referred to dissecting the cartilage from the skin. I should like to ask the method of doing this. I should think the same thing would be necessary when injecting under scar tissue.

DR. HARMON SMITH—At the tip of the nose, where the skin is adherent, I simply swing the point of the needle around under the skin. In other cases it may be necessary to use a small tenotomy knife to relieve the adhesions.

DR. ROBERT C. MYLES, New York—Those of us who have used the old syringe have had great difficulty in controlling the injections when the paraffin was in a more or less liquid state. My cases have been troubled more with redness of the nose than his seem to have been. He takes it away with ichthyol, but I have not always been so fortunate. I had one man develop red streaks. The pressure of the paraffin on the veins and arteries seems to obstruct them and they become more or less enlarged.

DR. C. M. COBB, Boston—One point that the essayist simply alluded to is the fact that sometimes the skin turns white during the process of the injection. It has alarmed me to see the skin become markedly pale and I have stopped the injection and massaged the skin and then done nothing more for a few weeks. I had one patient with a very satisfactory result, except that the nose was somewhat red. That was more than a year ago and it is somewhat red yet. Peroxid of hydrogen relieves the redness temporarily. Alcohol did him no good. The mixture of clay, bismuth, etc., put on the market under various names, put on at night, did some good.

DR. E. FLETCHER INGALS, Chicago—Would it not be possible to melt the paraffin after injection without injury to the skin? I do not know the highest temperature the skin will tolerate, but I do know it will tolerate at least 113 F., possibly more. I should like to know what temperature could be safely borne. If this could be done we might melt the paraffin and withdraw any excess by an aspirating syringe.

DR. HARMON SMITH, New York—As to what Dr. Myles has said regarding the photographs, there are mistakes made both ways. You never get a picture that looks as bad as the patient before, nor one that looks as good as the patient when it is done. When you ask for an absolute profile, frequently the photographer will give you a three-quarters. The same thing is largely true of the size of the picture. Redness is present in a good many cases. I have seen a case in which the redness lasted over a year, but it gradually disappeared. There seems to be a tendency on the part of Nature to take care of a foreign body, and I think the reinforcement of connective tissue that grows into this mass requires an increased

blood supply, and later, when the blood supply is no longer necessary, the redness will disappear. As to the furnace worker, I think if the man would remain away from his work for, say a week or two, he could then go back without danger of shifting the paraffin. Although it might be made soft and doughy by excessive heat, it would not shift. I do not think the heat would extend far down into the subcutaneous tissue, as body temperature remains the same regardless of external temperatures. Dr. Cobb has spoken of the white appearance that results from getting too much paraffin in. I invariably stop when I see the tissues becoming white, for I think then I am near the danger line. There is then considerable pressure, which is often due to not liberating the adhesions sufficiently. Beware of hyperinjection. Take time and you will have little trouble.

Dr. Ingals has spoken of the possibility of aspirating the paraffin, when for any reason it is desirable to remove it, after first melting it while in the tissues. I have tried almost every method for removal. In one case the patient had tried to iron it out and had failed. In another case, which had been injected by another physician, numerous injections had been made in an attempt to relieve the deformity resulting from atrophy of the muscles of the face, with the result that a number of little balls of paraffin remained under the skin. I tried to iron it out, but without marked success. In this same case, where there was some paraffin escaping from a small opening in the skin, I tried to iron it out, but was only partially successful. However, in this case some time had elapsed since injections were made. I did succeed in smoothing the surface somewhat.

THE SUBCUTANEOUS INJECTION OF PARAFFIN FOR THE CORRECTION OF DEFORMITIES OF THE NOSE.

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(*Concluded from page 703.*)

INSTRUMENTS.

The instruments necessary for the proper performance of this operation are very simple and very few.

A special receptacle for the paraffin, as described by Smith, while convenient, is not essential.

The syringe is the all-important consideration; an all-metal syringe is to be preferred because of the ease with which it may be absolutely sterilized by boiling. One with the screw worm on the piston rod, and on this the thumb screw that can be attached to the barrel of the syringe, is almost invaluable. The size of the syringe is not so very important; that it be not ungainly in the handling is about the only practical limitation. Smith and many others use one with a capacity of about 90 minims, while Downie employs one that will hold 10 c.c. (2.5 3).

The needle should be short and but a little larger in diameter and lumen than is the ordinary hypodermic needle.

TECHNIC.

As regards the technic, that of Gersuny has not been modified to any considerable extent. With the exception of the special syringes, the instruments are practically the same. The operation may usually be carried out in the following order: 1, preparation; 2, anesthetic; 3, introduction of the paraffin, and 4, after-treatment.

1. *Preparation.*—The most careful and painstaking antiseptic precautions must be observed. The skin of the nose, cheeks, forehead and chin must be given a thorough scrubbing with soap and water twenty-four hours before the time set for the operation, or better, once forty-eight hours, and then again twenty-four hours before the time set for the injection. The night before a moist dressing should be applied over the proposed site of injection, over this oiled silk, and then a bandage to keep it in place.

Immediately before the operation, with the patient on the table, the skin of the nose and face should be once more cleansed. The patient's head and hair should be covered with a sterile cap and the remainder of the body with a sterile sheet. The operator's and assistant's hands are being rendered surgically clean while the instruments are being boiled and the paraffin is being again sterilized.

2. *Anesthetic.*—A general anesthetic is never absolutely necessary. A local anesthetization of the skin, at the site of the entrance of the needle, is all that is necessary in the great majority of cases. There is a diversity of opinion regarding the use of a general or a local anesthetic in this class of cases. Downie says:

Figure 1.

"The patient may or may not be anesthetized. In many cases there is a distinct advantage in having the patient under an anesthetic. A local anesthetic is, in my opinion, inadvisable."

On the other hand, there is certainly a distinct advantage in having the patient not under general anesthesia, and in certain cases the use of a local anesthetic is the only way that this is possible. While the dangers of general anesthesia are very small, they are, nevertheless, constantly with us and must be considered. The location of the intended insertion of the needle for the injection of the paraffin can be easily anesthetized with a solution of cocain or eucain B., the strength of the solution varying from 1 to 4 per cent., according to different authorities. A 1 per cent. solution was used in all cases by the writer.

Freezing with ethyl chlorid of the site of the future needle puncture may be employed as a preliminary step

before the injection of the cocain or as the only local anesthetic, dispensing with the cocain entirely.

In some cases, the injection of the paraffin has been made without any preliminary anesthesia of any kind, either general or local. But the anesthetization of the skin, at the site of the puncture, is advisable, in order to prevent any sudden movement or jerking of the head at the time of the needle prick, which might be the cause of more or less serious damage or inconvenience.

3. *Introduction of the Paraffin.*—The paraffin, having been boiled with the instruments, is now in the fluid state, and is drawn into the syringe—the barrel of the syringe had best be about three-quarters filled. With the ordinary syringe considerable haste is now required in order to make the injection before the paraffin will solidify in the needle of the syringe, so causing great difficulty and force in its removal, and with the probability of irregularities in the mass because of the unevenness of the force applied during the injection. However, with a syringe such as has been described by Smith and by Freeman, this haste is not necessary, the force being applied by means of the screw arrangement, and the result is always even and satisfactory, no matter how long a time may have elapsed between the filling and the emptying of the syringe.

The air being expelled from the syringe, all is ready for the introduction of the paraffin. The skin of the nose is picked up in a fold, and the needle then inserted under the skin. It has been recommended that the skin be incised with a small scalpel, as a preliminary step, and then followed by the insertion of the needle, in this way hoping to decrease the pain and the resistance to the passage of the needle. The site of entrance of the needle should be away from the region of the greatest deformity. If a saddle-back nose, the needle is usually made to enter the skin at about the junction of the nose with the forehead, about on a level with the eyebrows.

Leonard Freeman, and the writer in his cases, have inserted the needle at the tip of the nose, instead of at the apparently more common situation. The chief advantage of this locality over the one more commonly used is that it allows more freedom in the manipulation of the point of the needle after it is once under the skin. Freeman says: "The thickened tissues at the tip of the nose prevents the paraffin from diffusing itself along the track of the needle, as is apt to occur in the areolar tissue at the base of the nose."

From either point, the needle is carried along subcutaneously until its extremity is at the most distant point of the deformity, and is then gradually withdrawn, leaving its deposit of paraffin as it recedes (Fig. 1). In this way all parts of the deformity may be reached with but the single puncture of the skin. The remote point of entrance is to prevent, in a way, the escape of the paraffin after the withdrawal of the needle. As the paraffin escapes into the cavity of the defect, the needle is slowly withdrawn, and with the finger of the left hand the operator molds and outlines the freshly deposited paraffin, thus preventing the injection of too large an amount, also preventing its extension into regions where it is not desired, and likewise preventing the occurrence of any lumps or irregularities in the artificial body. A little finger inserted into the nostril will prevent an encroachment on the lumen of the nasal canal.

The needle should be well withdrawn by the time the deformity has been fully corrected, after which the needle is removed through normal skin, in which it leaves no paraffin and the puncture sealed with a collodion and cotton dressing.

It has been recommended that the entire defect be not remedied at one injection. This is especially good advice when the tissue to be injected is dense and inelastic. Rather inject too little than too large an amount.

4. *After Treatment.*—If the injection has been made into loose tissue, the paraffin must be kept quiet and free from pressure, otherwise it may migrate into the surrounding structures. Under such circumstances, iced cloths may be applied to the region in an effort to make the paraffin set more rapidly. Sometimes there may be for, perhaps, the first twelve hours after the operation a marked disturbance in the local circulation, as is evidenced by great redness and swelling and, more rarely, pain in the tissues about the eyes and nose. This transitory reaction may also be relieved by the application of cold compresses.

Figure 2.

Paget gives his patients a hand glass as soon as they come out from under the general anesthetic and allows them to mold the nose at that time.

After the first twelve hours the swelling, the redness and the pain rapidly diminish, if they have not already gone, and, as a general rule, no further treatment is required.

REPORT OF CASES.

CASE 1.—Mrs. F., American, widow, aged 42. When a small child was struck in the face with a sharp ax, which resulted in a severe injury to the nose, the nasal bones were broken and followed by a necrosis, which caused a loss of the entire septum, a depression of the nasal bridge and collapse of one nostril.

Examination revealed on a profile view (Fig. 2): 1. A typical saddle-back nose. The extent of this depression, or sinking in of the bridge of the nose, was about one-sixteenth of an inch below the normal line of the nose, the greatest depression being situated at about the junction of the nasal bones with the lateral cartilages of the nose. 2. The tip of the nose was forced upward; this feature was exaggerated by the depression immediately above it. 3. A still more unsightly deformity consisted of a ridge or strip of flesh extending from about the junction of the middle with the superior third of the upper lip to the internal aspect of the tip of the nose. The attachment of this strip at the labial extremity was considerably below the cleavage of the lip and the nose proper, in consequence of this low origin daylight could be seen between the superior margin of this strip and the inferior margin of the nose proper. This artificial column was about half an inch in diameter at the labial insertion, and from that tapered down to about a quarter of an inch at the nasal end.

This objectionable strip of tissue was the result of a previous operation, the object of which was to supply the nose with an

Figure 3.

artificial column, and so to divide the single anterior nares into two, and in this way decrease to some extent, at least, the deformity. In this operation a flap was dissected from the median line of the upper lip, turned on itself and attached to the internal surface of the tip of the nose. This flap healed in place nicely, but it was too large and bulky at the lip, and was attached to the lip at a point too low down, so allowing a space between the new column and the inferior margin of the nose proper.

This operative procedure for the formation of a new columna nasi was first described by John B. Roberts, in the Mutter Lecture of the College of Physicians of Philadelphia, 1900, entitled "The Surgical Treatment of Congenital and Pathologic Disfigurements of the Face." (*Phil. Med. Jour.*, June 23, 1900, p. 1425.) Yet, despite such a prominent publication and as an example of the disregard of American writings by some of the European writers, we find in the *Medizinskoie Obozrenie*, Vol. lviii, No. 15, an article by P. I. Kusmin, entitled "A New Method of Correcting the Destroyed Nasal Septum," which is practically the same method as has been recommended by Roberts and employed in this case.

In this instance the result is unsatisfactory, in that the base of the flap took its origin too far away from the junction of the nose and the lip. This fault was corrected by subsequent operations, but as no paraffin was injected they will not be considered under this title.

On a front view of the face (Fig. 3) the most noticeable departure from the usual was a collapse of the right nostril. That portion of the nose usually held in proper position by the inferior lateral cartilages was flattened and almost in contact with the median line. There being no septum the interference with respiration, especially inspiration, was not marked. The patient usually wore a metal, aluminum, intranasal support, in this way almost correctly remedying the defect. The wearing of this support was irritating, annoying

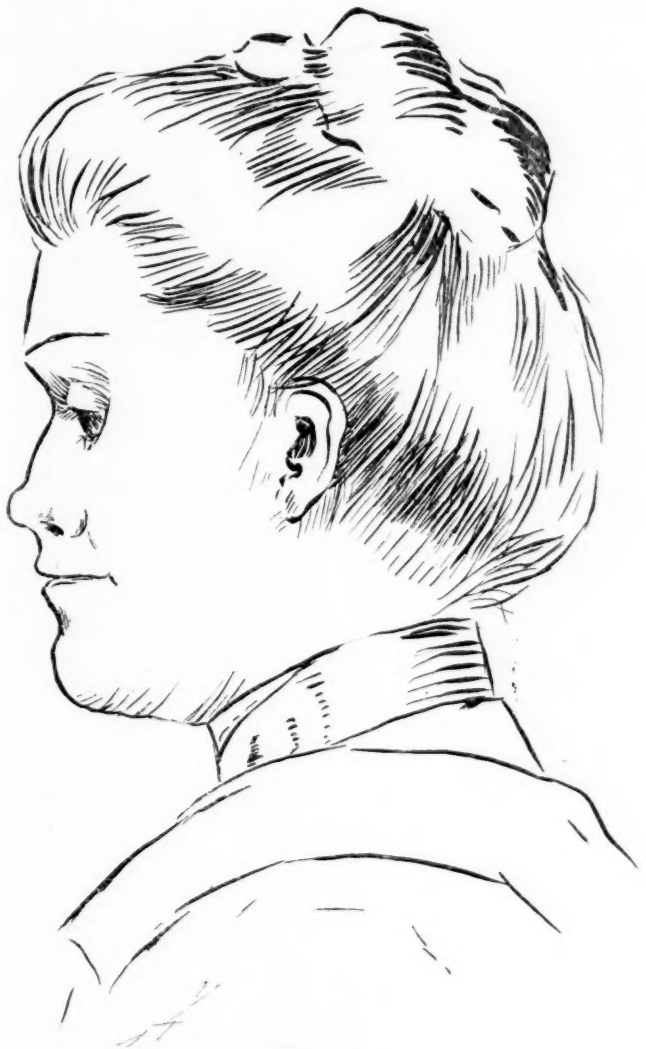

Figure 4.

and objectionable. The new column was very prominent and bulky at its origin from the upper lip, and appeared as a reddish bunch on the lip. The depression in the bridge of the nose was not so noticeable as in the profile view. The tip of the nose seemed to be tilted upward and the anterior nares seemed to present in an anterior inferior direction, instead of in an inferior direction, as they should normally. On an intranasal examination, there was noted most prominently the absence of a septum. The mucosa lining the cavity appeared to be normal.

The patient came requesting that her nose be improved on; that the artificial septum be raised at its labial extremity so that it might appear continuous with the nose on profile; that the sinking in of the right ala might be remedied so that it would not be necessary for her to wear the intranasal support, and that the depression in the bridge of the nose might be rendered less conspicuous, if not removed.

All these conditions were in time corrected, but, in accordance with the title, this paper will deal only with a consideration of those operations in which paraffin was injected as a prosthetic measure.

Operation 4, Injection 1.—A typical operation for the repair of a saddle-back nose: Cocain, 1 per cent. solution, was employed as the anesthetic. The needle was made to enter the skin at a point near the tip of the nose, and about twenty drops of the paraffin were injected. There was no pain during or soon after the operation; the next day and the day following there was noted a sense of fulness and some uneasiness, but at no time was there any complaint of sensation coming under the heading of pain, in its proper sense.

The second day after the operation there was noticed a slight redness of the skin over the injected paraffin, this increased for about a day and was then pronouncedly red.

This redness remained stationary for about a month, and since then has very gradually decreased, so gradually, in fact, that there is still a distinct reddened area over the bridge of the nose. On pressure this redness will disappear, but returns immediately after the removal of the pressure. A few dilated and tortuous capillaries course their way over this area. The condition is still present fourteen months after the injection. There has been practically no change or decrease

Figure 5.

Figure 6.

in the redness during the last six or seven months, it is not as marked as it was during the first few months, but still requires the profuse application of face powder in order to prevent her nose from being conspicuously red.

There is absolutely no pain, tenderness or abnormal sensation over the injected portion, or any other portion of the nose or face. With the exception of the redness the operation is quite satisfactory in its outcome, both to patient and surgeon; another small injection is needed to make the result perfect (Fig. 4). The obliteration of the dilated blood vessels by means of electricity or by crucial incision of the skin is now under consideration.

Operation 6, Injection 2.—A second injection was made in the same case two months after the first in an attempt to remedy the collapse or flattening of the right wing of the nose. In reviewing the literature on this subject, very meager as it is, no practical method with anything but a remote promise of success seemed to present itself.

Roe advocates in such cases that we incise the lower shield cartilage, and sometimes the upper shield cartilage also, sufficiently to overcome their elasticity, and then to hold the alæ, with their incised cartilages, in the more expanded position, until repair takes place, and the tissues are fixed in their new shape and form. He also recites a case in which the cartilage is dissected subcutaneously and "reset" in its proper, or at least in a better, location.

Such maneuvers in this case were out of the question, as there was no cartilaginous tissue in the ala of the nose on the right side.

The more radical method advocated by Fritz Koenig (*Berl. Klin. Woch.*, Feb. 17, 1902) of replacing the abnormal or diseased ala by a portion of the entire structure of the auricle and suturing this in place on the nose, seemed a trifle too radical for any condition in which there was not an absence of the ala. But no other method of replacing the missing cartilage seemed available. At this time the idea of producing artificial cartilage presented itself and was grasped as a most satisfactory solution to the rather trying problem.

Accordingly the ala was injected with paraffin as follows: After a careful and proper cleansing of the skin and mucous membrane of the nose a preliminary anesthesia, Schleich's solution No. 1, was injected into the site of the proposed par-

Figure 7.

affin injections. After a lapse of about twenty minutes the needle of the syringe containing the paraffin was inserted into the free edge of the ala at a point about half way between the tip of the nose and the cheek. The needle was made to penetrate about three-eighths of an inch, and then about six drops were injected. The needle was withdrawn and the puncture sealed with collodion.

The needle was now introduced at a point three-quarters of an inch above the free border of the ala, in about the center of the lateral aspect of the nose from above downward, for a distance of about a quarter of an inch, and the same amount of paraffin injected.

The intranasal support was now introduced and held the parts in approximately normal relations, iced cloths were applied for twelve hours and the intranasal support allowed to remain in place for ten days.

There was absolutely no pain or inconvenience caused by the injection, and the course of the case was uneventful. There is considerable improvement in the appearance of the nose, but it is not as perfect as it is when the ala is held in proper position by the intranasal support (Fig. 4). The result, while not perfect, was such as to make considerable of an improvement in the countenance and expression of the patient. In a case less complicated, with more substance to act as a foundation, as in congenital deformities, it is probable that a still more satisfactory outcome could be obtained. Unfortunately

the writer has never seen a similar case treated by any other method, and so is unable to draw any comparative conclusions. Parker reports one case treated in this manner, but with no improvement after repeated injections.

CASE 2.—Tim M., miner, Irish, aged 28, in a rough and tumble fight was unfortunate enough to have the tip of his nose bitten off by his opponent. He presented himself, ten hours after the accident, at the St. Vincent's Hospital, with the separated portion of his nose wrapped up in a piece of newspaper, and requested that it be sewed in place. Wet dressings were applied to the abbreviated feature and in due time flaps from the cheek were brought over and the defect covered up. The result was satisfactory in covering the defect with skin, but the configuration of the nose was far from satisfactory, owing to the absence of the tip. The front view was not

Figure 8.

so unusual or remarkable, but the profile presented a marked and conspicuous deformity in the absence of the tip; in fact, the distal third of the appendage was missing (Fig. 5).

This was, in a way, remedied, or rather rendered less noticeable by the introduction of paraffin into the region formerly occupied by the extremity of the nose. After the usual cleansing and the regular preparations, about ten minims of paraffin were injected under the flap and in about the median line, so that it would rest on the remains of the cartilaginous septum.

After a month this procedure was repeated, without any undesirable result after either injection (Fig. 6). The improvement was encouraging and the skin over the injected mass normal in every particular and not at all tense or stretched. Other injections were planned, but the patient disappeared.

The introduction of small amounts, at intervals, is undoubtedly to be preferred to the single injection of larger amounts, in any location and under all circumstances, but it is especially true and important when injecting into a region so notoriously non-vascular and prone to necrosis as the tip of the nose. And of still greater importance is this precaution when the overlying skin of this part has been transplanted from a neighboring region.

CASE 3.—Dick G., laborer, American, aged 37, about eleven years ago fell down a stairway and injured his nose. No physician was called to see him, and he paid little or no attention to the injury; he merely remembers that for about a week or so his nose was tender and his entire face swollen. After the swelling subsided he noted a depression in the bridge of his nose (Fig. 7.), which has remained about the same ever since. It caused him no pain or inconvenience other than the slight deformity. The skin over the depression is normal and moves freely over the cartilage and bone.

A typical operation for "sadle-back" nose was performed, technic as described above; fifteen minims were injected at one sitting. The result was a marked improvement in his appearance and was very satisfactory. No redness of the skin over the injected area or any other objectionable features resulted (Fig. 8).

CASE 4.—Mr. W. E., miner, American, aged 32, three years ago, while in a fist fight, was struck on the nose. He had considerable nose bleed, pain and marked swelling the next morning, at which time he consulted a physician, who told him that his nose was broken, and then proceeded to "set" it. After the swelling had subsided a depression of the bridge was noted, which has remained practically the same ever since (Fig. 9). The greatest depression is at about the junction of the nasal bones with the cartilages and in depth is about one-sixteenth of an inch. The skin and overlying structures

Figure 9.

Figure 10.

are normal and freely movable. Treatment consisted of a subcutaneous injection of paraffin, the same as in the case above. about twenty-five minims were injected at one sitting, and the result was eminently satisfactory in every respect (Fig. 10).

CONCLUSIONS.

1. Corning was the first to use solidifying oils in surgery.

2. Gersuny was the first to recommend and to use paraffin subcutaneously as a prosthetic measure.

3. The use of paraffin as a prosthetic substance is still in an experimental stage.

4. The field of usefulness of paraffin subcutaneously in other than nasal deformities is rapidly increasing.

5. Prosthetic operations, undertaken solely for cosmetic effect, should be absolutely harmless.

6. All cases, regardless of the termination, should be reported, as it is only by a study of a large number of cases that the legitimate place of this method in surgery can be ascertained.

7. The special syringe, with screw pressure, is almost indispensable.

8. A general anesthetic is rarely, if ever, indicated.

9. The needle may be made to enter at either the base or the tip of the nose.

10. Rather inject too little than too large an amount of paraffin.

11. In a series of six cases, but one of the numerous objections was encountered, and that a redness of the skin remaining permanently after the injection.

DISCUSSION.

DR. ANDREW W. MORTON, San Francisco—My experience with paraffin injections has been limited to 25 cases. My method is somewhat different from Dr. Connell's. I bring the melting point of the paraffin to 109 degrees by the use of sperm oil, after which it is sterilized by boiling. I am careful to introduce it just as it is beginning to coagulate. It has been proven thoroughly by Dr. Comstock that we must have the paraffin about the temperature of the blood to prevent embolism; it is also well to have the paraffin a little above the temperature of the blood or it will not support the deformity. For the introduction of the paraffin I have been using the Lures glass syringe. I always introduce the needle at some distance from the deformity beneath the skin, allowing the point of the needle to come just beneath the deformity, then I attach the filled syringe and introduce the paraffin.

It has been used in a great variety of cases, but the principal use, in my opinion, is for the saddle-back deformities of the nose. We know there is no class of deformities where we have need of repair more than in those cases. On account of the weakness of the structures, if we use an artificial bridge it is always causing irritation and operations are not satisfactory. In regard to the quantity of the paraffin, I always use a small quantity and repeat it if necessary, but I think this is very immaterial if we do not produce tension, and I think Gersuny has called attention to that; his experience has shown that the amount injected at one time does not make any material difference. I have introduced 40 c.c. at one time; it was in the case of an absent testicle; the man wished to enter the marine-hospital service, but had been rejected. I injected the 40 c.c. at one time, and there was absolutely no change so far as inflammation was concerned, and the day he went away I could not discern which was the artificial testicle except by palpation.

There is one subject that has not been touched on, and that is, what becomes of the paraffin? It was claimed that it could not be absorbed, and would remain in the tissues as paraffin. Recently I had a case which enabled me to make some very interesting experiments. Some of the paraffin had worked down into the tissues and interfered with the breathing space. I took out sections at the end of one, two, three and four months respectively. In the first section you will see paraffin globules; later you will notice that they have been infiltrated with leucocytes and tissue cells. In the last specimen you see an entire absence of the paraffin. This shows that the paraffin is destroyed and its place is taken by connective tissue. In regard to the shrinking of the paraffin, I believe that it will shrink to a slight degree, owing to the small amount of oil which passes off after the injection. As to the principal dangers of the operation, they are: 1, infection; 2, tissue necrosis, or necrosis of the bone; 3, embolism. The infection can be prevented by being aseptic. It is also possible to prevent sloughing, provided you do not use your paraffin at an extreme degree of heat, or produce a great amount of tension on the skin. In regard to embolism, one case of lung embolism has been reported that we attributed to this method. A large amount of paraffin was used, the operation being done in the physician's office for some prolapsed condition of the rectum, and the patient was allowed to enter a carriage and ride home —not a very cautious thing to do. One of the principal points is not mentioned in the report, the melting point of the paraffin. I do not believe that there is very much danger of embolism if we use the paraffin at a melting point above the body heat.

DR. JOHN P. LORD, Omaha—Dr. Connell speaks of the disadvantages of the reddened area. I want to say that our experience with the *x*-ray in the blanching of unsightly red scars has been so satisfactory that I have perfect confidence in it, and the technic should be that the exposure should be of short duration and the treatment should cover a long period of time, care being exercised not to produce a burn. The *x*-ray obliterates the small blood vessels by producing an hyperplasia of the connective tissue cells which squeeze out the blood vessels. Of course, if the blood vessels are of any size I would recommend the use of the electrolytic needle, but if it is simply a redness I think the *x*-ray can be depended on to accomplish very satisfactory results.

DR. WILLIAM J. MAYO, Rochester, Minn.—The methods employed for the repair of depressed noses may be divided into three groups: first, those by a flap from the forehead or cheek or the tip of the little finger, and things of that kind carried to the nasal defect, the best result being that after we got through most people would say that it did not look much worse than it did before. In the second class we introduce a celluloid bridge. Some exceedingly good results have been obtained, but after a time atrophy necrosis takes place in the majority of cases, and we have to remove the celluloid. Therefore, when this paraffin method came out it was taken up enthusiastically, particularly by my brother, Dr. C. H. Mayo, who has had considerable experience in this line of work. He has operated on a large number of cases and the results have been strikingly good. You see the patient come into the hospital with a deformed nose, and in twenty minutes he goes out again, his appearance so changed that his best friends would scarcely recognize him. In regard to those cases in which the deformity is due to a compound injury, if you were to attempt to inject enough of the paraffin to get a good result you would be very liable to get into trouble, on account of the adhesions of the skin to the deeper parts. In those cases a small knife is introduced and the tissue cut loose a few days previous to the injection; the paraffin can then be injected without trouble. It is advisable in some cases, where you have to sever the tissue in this manner, to use an injection of saline solution to loosen the tissues still further, and follow this in a few days by the injection of paraffin.

MULTIPLE PERIOSTEAL SARCOMATA OF THE CRANIUM,

WITH INVOLVEMENT OF RETROPERITONEAL LYMPH NODES, AND ATTENDING SEVERE, PROBABLY PERNICIOUS, ANEMIA.*

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IOWA CITY, IOWA.

Through the exhaustive work of Warthin the retroperitoneal lymph nodes or hemolymph glands have been given an important rôle in human pathology. Changes in these hitherto frequently unrecognized structures are specially significant of anemia and processes accompanied by hemolysis.

I feel that the case, a description of which I wish to submit, illustrates this relationship in a special way, and offers a few additional points of pathologic interest as to warrant its being presented before this section.

The case occurred in the practice of Dr. C. B. Kimball of West Liberty, Iowa, to whom I feel indebted for calling my attention to it and furnishing me with the principal clinical data, which in brief were as follows:

A. B., girl 5 years of age, who until three months before her death enjoyed good health and had been regarded as an unusually robust child. When first seen by her medical attendant she presented a mild degree of anemia, a slight rise of body temperature, some malaise, impairment of appetite, and physical weakness. During the period of illness mentioned, the anemia assumed a progressive pernicious character, the pyrexia

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. L. Hektoen, F. B. Wynn and W. S. Hall.

of one to two degrees continued, and the emaciation and physical weakness proportionately increased.

At my first opportunity to see the case, Oct. 5, 1902, the anemia was quite pronounced and the child appeared weak and listless. There was no enlargement of any of the palpable lymph nodes, but over the frontal region a soft subcutaneous sessile tumor-like enlargement, about three centimeters in diameter, was observed, which was apparently attached to the frontal bone.

A hemic murmur was noted over the base of the heart; the lungs were negative; the splenic area of dulness not increased, and the organ not palpable. Area of hepatic dullness not increased, Urine acid, specific gravity 1,022; chemical tests negative. Signs of intracranial pressure were not present.

I saw her again one week before her death, when she appeared in a semicomatose state, the anemia being very profound and emaciation specially marked. There was no noticeable change in the different lymph nodes. The spleen was not enlarged, though a perceptible yet slight enlargement was noted in the hepatic area of dullness. Urine negative. Lungs negative. Hemic murmur still very pronounced over the basal region of the heart.

The frontal tumor had apparently enlarged and four more tumors were now to be detected over the parietal and occipital bones, and one over the left mastoid region. A slight degree of exophthalmus was present. The blood count revealed erythrocytes, 982,000; leucocytes, 9,600; hemoglobin, 30 per cent. Differential count in 17,874 red cells revealed: megalocytes, 473; microcytes, 328; poikilocytes, 45; megaloblasts, 23; normoblasts, 19; leucocytes, polymorphonuclear, neutrophile, 68.6 per cent.; eosinophile, 2.26 per cent.; large lymphocytes, 2.52 per cent.; small lymphocytes, 26.46 per cent.; myelocytes (neutrophile), 63 per cent. Proportion of white to red cells, 1 to 113. Most of the erythrocytes were about the average in size

At this time a clinical diagnosis was proposed of multiple periosteal sarcoma, with attending severe secondary, probably pernicious, anemia.

Report of Autopsy.—Nov. 20, 1902. General emaciation very marked, the skin being extremely pale. No change noticeable in the cervical, axillary, clavicular, and inguinal lymph nodes.

Skull and Cranial Contents.—After removing the scalp seven distinct circumscribed tumors are observed attached to the skull, appearing as cushion-like growths and distributed as follows: One over the frontal bone, two on the left parietal, one on the right parietal, one over the right mastoid, and two on the occipital bone. The tumors are of soft consistency and vary in color from deep gray to pinkish and reddish gray; in diameter they range from 3.5 to 6 centimeters. The growths extend above the bone about one centimeter, and are well defined from the skin and subcutaneous tissues. After the skull cap is removed the tumors are seen to have completely penetrated both the outer and inner tables, the latter presenting a distinct honeycomb appearance; the growths also involving the dura mater.

A considerable amount of subdural serous effusion is present. The brain is pale and anemic, but otherwise negative.

Diaphragm at Fourth Rib, Right and Left.—Pleura and pericardium negative; heart valves intact, musculature anemic and somewhat atrophic. The lungs are pale and freely movable with some passive congestion in the lower lobes; bronchi pale, containing a grayish foamy liquid. Esophagus contains a small amount of foamy mucus, mucosa pale.

No fluid in the peritoneal cavity. The spleen is not enlarged, on section it is a pale brownish red; pulp is soft and bleeds readily. The liver appears slightly enlarged; the surface is smooth; on section the surface is cloudy, and of a pale red chocolate color; a slight fatty smear is left on the knife; outlines of lobules distinct; throughout the liver substance a limited number of light-colored circumscribed areas are noted, ranging from 0.3 to 0.8 centimeters in diameter and having the macroscopic appearance of the cut surface of the cranial tumors. Gall bladder negative. Kidneys are pale; a retention of fetal lobulation exists, otherwise negative. Bladder negative. Pancreas and suprarenals negative. The stomach and intestinal mucosa is pale, but negative in other respects. Mesenteric glands are negative.

In the retroperitoneal region a marked enlargement is noted in the prevertebral lymph nodes or hemolymph glands; extending from the brim of the pelvis upward along the aorta and vena cava are sixteen enlarged and dark red glands, forming in reality a dense mass involving an area of 5x12½ centimeters; the larger glands being 2x3½ cm. in dimensions, and of a dark red color; the smallest examples having a coffee-bean shape, 0.6x1 cm. in diameters; pale and red nodes are noticed placed side by side. A few of the smaller glands extend along the renal vessels. The entire mass is imbedded in fat and very closely connected with the surrounding blood vessels.

The long bones were not opened owing to the restrictions placed on the autopsy, but the cross section of the sternum presented the hemorrhagic appearance of marrow peculiar to severe anemias. The extreme emaciation of the body permitted a good examination of the surface of the different bones, and disclosed an absence of any periosteal growths or enlargement of the bones.

Histologic Examination.—The tissues were all studied in serial paraffin section, and stained by hematoxylin and eosin, Van Gieson's, and Mallory's stain for connective tissue, and the potassium ferrocyanid method for demonstrating hemosiderin.

Periosteal Tumors.—While the general histologic picture is that of round cell sarcoma, there is some degree of variation between the several tumors. The cell element consists of a round cytoplasmic mass with a nucleus rich in chromatin, the latter varying in size, frequently granular, and seen in varying stages of mitosis; a delicate intercellular reticulum is present; the fibrous tissue stroma following principally the blood channels forms an alveolar arrangement in some portions and presents the type of an alveolar sarcoma; again the prominence of blood vessels and hemorrhage give a picture resembling angiosarcoma, while the light gray colored tumors in section reveal a type like lymphosarcoma.

The ordinary lymph nodes present no definite histologic changes. Heart and lungs are negative. Brain is negative.

Spleen reveals a slight degree of fibroid hyperplasia; hemasiderosis is very marked. Adrenals, kidneys and pancreas are negative. The stomach and intestines reveal some signs of catarrhal inflammations.

Liver.—Cloudy swelling in the cells, lobules are not well defined, and interlobular interstitial connective tissue is not increased. Distributed throughout the liver substance are well-circumscribed areas representative of metastatic growths secondary to the periosteal tumors, evident by reason of their identity in structure. Their histology consists of small round cells arranged in distinct alveoli formed by rather delicate fibers of connective tissue, resembling the picture of alveolar sarcoma. Hemasiderosis is present.

Hemolymph Nodes.—The smaller nodes 0.5 cm. in diameter present a histologic picture resembling the so-called marrow-lymph variety of hemolymph nodes, consisting of well-defined sinuses apparently lined by endothelium; throughout these sinuses a delicate reticulum is noted holding in its meshes principally red blood cells and a few leucocytes. Among the red cells normoblasts are observed and an occasional megaloblast. A few eosinophiles are seen. Some of the blood sinuses are very short and irregular. The constituent lymphoid tissue adjacent to the blood sinuses is made up of columns or bands of cells chiefly lymphoid (small mononuclear) in character; these cells also lie in a very delicate reticulum; large mononuclear lymphocytes are observed in small numbers, frequently mitotic figures are seen and again some of the nuclei appear also completely disintegrated. Large collections of hematic pigment are seen in the lymphoid area and the iron reaction is brought out by application of the potassium ferrocyanid stain. A few hyaline bodies are noted.

In the larger examples of hemolymph nodes, especially those having dimensions 2x3½ centimeters, the round or lymphoid cell infiltration completely obscures the essential hemolymph structure.

The cells are arranged in columnar-like collections divided by bands of fibrous connective tissue of greater or less density, forming alveolar areas resembling the picture of alveolar sarcoma; again in some areas the resemblance to lymphosarcoma is very striking. The cells contain large round granular nuclei, with varying figures of mitosis, resembling the cells of round-cell sarcoma.

In the peripheral portions of the enlarged nodes well-defined areas of red blood cells are seen and the lumina of well-formed blood channels are observed, some of which resemble closely the sinuses of hemolymph nodes except that the delicate intercellular reticulum is not apparent. Small areas of caseation are present in some of the cell areas. In all of the enlarged hemolymph nodes hematic pigment is abundant, some of which responds to the iron reaction, phagocytes containing hematic pigment being noted in the blood channels.

Unfortunately the circumstances of the autopsy prevented the histologic examination of the bone marrow.

Summary.—The features that invite interest in connection with this case are the multiple periosteal sarcomata confined to the cranial periosteum, the secondary involvement of hemolymph nodes, and the attending severe, probably pernicious, anemia. The origin of the tumors from the periosteum seems evident by reason of the intimate connection with the surface of the bones; the involvement of the inner table and extradural tissue being the result of extension.

If one of the periosteal tumors is to be regarded as the primary growth and the others as secondary nodules, it would seem like rather an unusual form of metastasis, and I prefer to regard them all as primary tumors.

It must be evident to all that considerable confusion exists in the literature on the various sarcoma-like tumors involving the osseous system, especially those which are attended by leukemic or pseudoleukemic change in other tissues. This is principally true of the multiple periosteal tumors having the histologic character of round cell sarcoma and described as chloroma and lymphosarcoma in which the relationships to pseudoleukemia is rather intimate.

Chloroma is frequently characterized by multiple periosteal plate-like growths especially of the cranium with metastasis in the lymph nodes, different portions of the skeleton and internal organs. In structure they resemble lymphoma or lymphosarcoma and contain a greenish pigment.

The absence of pigment in the case in question, especially in the fresh specimens, excludes chloroma, but in some other respects there is a great resemblance to this peculiar tumor process.

Closely related to chloroma are those non-pigmented pseudoleukemic periosteal tumors having the structure of lymphosarcoma which have been extensively considered by Claus under Marchand's direction, the same appearing as cushion-like growths on the skull, sternum, ribs, pelvis, spinal column and femur with tumor formations in the tonsils, lymph, nodes, liver, and marked enlargement of the spleen. Lazarus, Gussenbauer, Chiari, and Dittrich have described more complicated cases in which the spread of tumors in internal organs was more prominent, giving the impression of a general metastasis, the relation to the primary periosteal localization of the malignant lymphoma, though, being well defined.

As to the tumor nodules in the liver and involvement of the hemolymph nodes with their identity in histologic structure to the primary cranial growths, the findings warrant regarding them as secondary or metastatic formations.

The close resemblance of the arrangement of cells, with numerous mitotic figures in the enlarged hemolymph nodes to that in the periosteal growths is so striking as to permit of no other conclusion than that they are metastatic.

Both of the secondary manifestations must be regarded as examples of vascular metastases, and it must be due to the connection of the hemolymph nodes with the circulatory system that they are more liable to involvement than the other lymphoid structures throughout the body. The fact that the lungs were not involved by metastasis may be attributed to the relatively small size of the constituent tumor cells permitting them to pass through the pulmonary circulation.

That the attending severe, probably pernicious, anemia is the result of hemolysis, is evident from the general blood changes and the hemosiderosis in the spleen, liver and hemolymph nodes. The blood findings are very similar to those of pernicious anemia.

This case offers a further illustration of the relationship between changes in hemolymph nodes and the severe anemias. According to Warthin there is a certain amount of normal hemolysis taking place in these glands, and the hemolysis of severe or pernicious anemia differs from the normal only in degree. As the last named condition is probably due to some circulating poison, the nature of which is as yet unknown, so in the case described it is a circulating sarcoma process, which by reason of its involvement of the hemolymph nodes led to an increased hemolysis in these structures.

It is in this class of sarcoma-like tumors, including chloroma, and those of lymphosarcoma and pseudoleukemic type that a parasitic cause will probably ultimately be discovered.

DISCUSSION.

DR. E. R. LECOUNT, Chicago—There is an intimate connection between the tumors in the case described by Dr. Bierring with the growths observed on the one hand, as multiple myelomas, and on the other in cases of chloroma. Had the tumors described in this case been possessed of a greenish cast Dr. Bierring would no doubt have considered his case as one of chloroma. The absence of the peculiar color does not seem to me sufficient reason for excluding the growths in this case from those in pseudo-leukemia, chloroma, multiple myeloma and acute leukemia. Therefore, I would object to the term sarcoma and prefer some name which would indicate their position correctly as examples of multiple growths unconnected with sarcoma in method of origin, growth and extension; for example, "multiple periosteal lymphomata" or "a case of chloroma with absence of the usual pigmentation." The term sarcoma has little to do with tumors that are primarily multiple.

DR. HENRY A. CHRISTIAN, Boston—Dr. Bierring speaks of the difficulty in such tumors of determining which is the primary growth. The relation that exists between the more or less diffuse processes in bones and definite tumor masses is a very close one, and to say that a certain growth is primary and the others are metastases is very difficult in a case like this. A great many similar examples have been reported and I would like to add one. It was a case in which both kidneys were very much enlarged, four or five times their normal size, but they were not distorted and there were no definite tumor masses in the kidneys. They were both of the same size. Microscopic study showed the kidney tubules to be separated by a growth which proved to be of the nature of a round cell sarcoma, a diffuse sarcoma appearing simultaneously in both kidneys. The bone marrow of the femur showed similar changes. The question is, whether we have here a tumor of the bone marrow metastasing in the kidneys, the development in the kidneys of a tumor, bilateral and simultaneous in origin, or have we some general diffuse condition of the bone marrow which has not found its expression in cellular changes in the blood vessels as in leukemia, but has affected certain organs in a similar manner as the bone marrow.

DR. WALTER L. BIERRING, Iowa City, Iowa—I appreciate what Dr. LeCount has said in regard to the terminology of this condition, but I labored for a long time in trying to name this process, and while I know that the term sarcoma is not entirely satisfactory, it seems to me that the various round-cell growths variously termed as chloroma, lymphosarcoma and small round-cell sarcoma are all more or less connected, and I think some day they will be cleared up and shown to be of parasitic origin.

I made a number of inoculations from fresh tissue material under proper precautions on the various culture media, but was unable to obtain any results. All tests for albumin and albumose in the urine were negative.

I regret that the restrictions of the autopsy prevented an examination of the long bones, but in this case I am still inclined to think that they were not particularly affected.

POLITICAL AND PROFESSIONAL ETHICS.*

JAMES D. LOVE, A.B., M.D.
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I believe that the majority of physicians concede the truth and justice of the philosophy of Bacon, who writes, "I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto." The very acknowledgment of such indebtedness carries with it obligations and duties which we as a body and as individuals can no more shirk than we can the duties and responsibilities we owe our patients. Hippocrates recognized the indebtedness he owed his profession, despite the crudity of medicine as it was then taught and practiced, and notwithstanding the less respected position then occupied by the medical fraternity. Probably the first universally received code of ethics, as offered by this worshiper at the shrine of justice and science, was inspired by the realization of this very indebtedness.

Notwithstanding the lack of erudition and despite the prevailing practice of charlatanry that existed in ancient and medieval times, medical men have, as a body, recognized certain obligations as being due their fellow practitioner and the community, and have commanded and received a certain respect as the inalienable endowment of their profession. We note, too, that as medical knowledge and scientific attainment have become more universal and of more value that the morale of our profession has improved, and with more honest methods prevailing there exists a more perfect sense of our obligations and duties.

Our profession has for ages been composed of men whose high sense of honor and integrity and whose moral and intellectual qualifications entitled them to a social standing second to no other class. The true physician has been and is clothed with habiliments of dignity which it becomes our duty to preserve and to hand to posterity in an unsullied state. The young man beginning his career as a physician receives as a heritage from his profession certain immunities, certain social rights and privileges and certain claims to the respect and esteem of his fellow beings, which by his own unassisted efforts he could only hope to win after years of unremitting devotion to the loftiest moral and ethical principles. It is this unsolicited and unearned inheritance which places the physician in the very springtime of his career under obligation to his profession. While in isolated cases this sense of indebtedness is ignored and the title of physician is prostituted by charlatans, yet I am proud to believe that as a body we have never been justly charged with unfaithfulness to our obligations.

The physician who wilfully devotes his entire efforts to his patients or to his family, who isolates himself from his fellow practitioners, who neglects his political and social duties, who contributes no assistance to medical societies and whose life is spent in his patient's behalf and his own self-aggrandizement, no matter how conscientious are his efforts and how honest his intentions, is not only remiss in the discharge of his entire professional obligation, but his narrow existence has unfitted him for the discharge of some of the most sacred duties he owes his fellow man. When he fails to exert his influence for the elevation of his profession and for increasing its sphere of usefulness, he can not excuse his course with the plea that the demands made on him by his patients are paramount in importance to the duty he owes his profession. For he who persistently adheres to this narrow course, who never looks beyond the horizon of his own private needs, defeats ultimately his own ends by lessening his influence in his immediate sphere.

The average physician is not and obviously could not be a politician after the usual acceptance of the term, but there is none among us who does not recognize the existence of certain political evils which by legislation might be corrected, and certain political reforms that would result beneficially to all. It is an established though unfortunate fact that there is in the public mind a deep-rooted prejudice against any interference on the part of the medical profession in political affairs. Let us as a body pass any resolutions or endorse any enactment for the preservation or improvement of the public health, or for the elevation of the standard of our profession, and our cause is at once prejudiced in the minds of the average individual, who is ready at once to attribute our acts to motives of selfishness and self-aggrandizement. It is only when through the medium of threatened or existing epidemics the public is brought to realize its dependence on the medical practitioner that we as a profession are in a position to dictate legislation suitable to our own and the people's needs. It is a matter of common observation that in the absence of epidemic sickness every community is singularly indifferent to the poor sanitary and hygienic conditions that may prevail, and are peculiarly resentful of any imputation on the healthfulness of their people. Unmindful or ignorant of those factors that might better their condition they lull themselves into a state of fancied security, ignore the advice of the physicians and are only awakened from their lethargy by the frightful ravages of some destroying epidemic. Then it is that they turn to our profession for deliverance, and then it is that the ear of the politician becomes receptive to our council.

I speak advisedly when I say that in our entire country there is not in a single statute book a law passed at the instigation of the medical profession that is not productive of more benefit to the masses of the people than to the physician. I challenge anyone to produce a single statute bearing on medical matters that can properly be construed as class legislation. In the history of legislation in Florida I challenge the production of even a single defeated bill which was endorsed by our profession and which had not for its prime intent the protection of the people of our state. And yet, despite this, any combined effort on our part to influence legislation is at once regarded with suspicion and fails of

* Read before the Florida Medical Association, at St. Augustine.

accomplishment on account of the designing, sordid and selfish motives that are attributed to us.

Our profession unanimously endorses a compulsory vaccination law because in the hands of medical men are statistics proving the miraculous preventive powers of vaccination against smallpox, and it is our contention that it is one of the fundamental laws of sociology that no man has the right to jeopardize the health and life of a community when by the observance of proper precautionary measures it may be avoided. Immediately there is raised the hue and cry that the autocratic doctor is aiming at the personal rights and privileges of the people, and as unselfish a bill as was ever presented to a fair-minded people goes down in defeat. Year after year are bills looking to the elevation of the standard of our profession and the protection of our people from charlatanry and imposition introduced in our legislature and to the din of vituperation and the slogan of interference with personal liberty our colors trail in the dust.

The enlightened physician is broad enough to realize and acknowledge that he as a component part of a community best subserves his own interests by best serving his people. He acknowledges that from a purely commercial point of view the result of epidemic disease would, by impoverishing his community, prove nearly as disastrous to him as to his people, but moved by a humane and altruistic spirit the doctor finds his chief reward in protecting and preserving the life and health of his fellow men even if, as often happens, his efforts encounter the opposition of the very ones he seeks to befriend. If our profession was composed of men of less charity and forbearance, an inappreciative public would be left to their own impotent endeavor to solve the problems of sanitation and protective medicine. It is no wonder that there is a tendency on the part of some of us to abandon a thankless undertaking, for it sometimes seems that in spite of our most loyal efforts it will always be thus, "truth forever on the scaffold, wrong forever on the throne."

Why the populace are less responsive to concerted action on our part than to individual effort can, in my mind, be only explained on the ground that when physicians band together for any accomplishment they are regarded as a trust, and the public generally is antagonistic to organization.

Compare this prejudice to medical organizations with the general approval with which our commercial bodies are regarded, and the result of such comparison is almost disheartening. If a board of trade endorses certain legislative enactments for the protection of the financial interests of a community, the masses of the people have sufficient confidence in the integrity of this board to wisely rely on and be governed by their endorsement. The press will come to their assistance and, if need be, a fund is created for the promotion of the enterprise.

Let a medical organization, on the other hand, originate or endorse measures which have a vital bearing on the health of the same community, and to whom will it look for support? The press in certain instances is subsidized by advertising charlatans, and the people, instead of according us their moral support, are either indifferent to our efforts in their behalf or are ready to rise in denunciation of our most honest purposes. The same confidence that is accorded us as individuals is denied us as an organization. Probably this is because the people, not being aware of their needs, resent as an interference any unsolicited or unrewarded action in this direction; for as concerns other matters of even less importance where the physician's assistance and council is solicited and remunerated, he must needs feel complimented and gratified over the confidence that is reposed in his integrity, ability and veracity. Courts of justice are guided or influenced by our expert testimony, even when the very life and liberty of people are at stake. Civil and military authorities rely implicitly on our statements and opinions, and there is a liberal and generous spirit manifested toward our individual efforts which renders it remarkable that our concerted political influence is so limited. I believe that little has ever been accomplished by the mere adoption of resolutions by medical organizations; and, on the contrary, I believe that the influence we as individuals might exert politically is practically unlimited. And when we note that through defective or unjust legislation our professional institutions are endangered, it becomes as much our duty to exert our political influence as to protect from violation the sanctity of our homes.

I believe that we neglect to utilize our peculiar advantages to educate the people to a realization of our needs and the impositions that they are subjected to at the hands of impostors and degenerates. The physician is in close contact with his patient at a time when his ear is most receptive to instruction and his nature most responsive to our honest appeal for justice. We watch the busy practitioner in the discharge of his daily duties. He it is who ministers to the sick and suffering around us, his the face to welcome to returning life and health those stricken by disease, his the voice to lend comfort and courage to woman on the verge of maternity, his the hand to close the eyes for their eternal sleep and to wipe the death damp from the brow. His the first voice to tender solace and comfort to that family visited by the grim destroyer and bid the stricken souls take hope again. To his patients he is more than a friend and his opportunity for exerting an influence is without limit and without rival. I ask, are we not remiss in the duty we owe our profession when we fail to enlighten the public as to our most pressing needs?

The physician, in order to practice his profession in our state, must, in compliance with the statute, have graduated from a reputable medical college and must further appear before a district board of medical examiners, whose duty it is to pass on his qualifications to practice medicine. An osteopathist, a spiritual or mental healer or Eddyite can, with practically no preliminary preparation and with an absolute immunity from any examination as to his fitness, treat any disease or injury in the domain of medicine or surgery. I protest against the discrimination of requiring the medical man to prove his fitness and placing no restriction on those who are obviously unfit from lack of scientific attainment to practice medicine in any of its branches.

Not less far reaching in its baleful effects is the sale and advertising of patent nostrums throughout our state. I admit the handicap that our profession labors under when it denounces a patent nostrum or appliance of any kind, and from personal experience I am aware of the motives that are attributed to us. But it is no less our duty to make some personal sacrifice and try to create a healthy public sentiment that will protest against this growing evil. In battling with this evil we shall find as our opponents some of our most prominent national legislators, some of the executives of our principal states, the clergy and men and women of every sphere and station in life. That these people, with their pure and irreproachable intentions, will endorse patent nostrums

and quackery that are in most cases not only useless, but positively dangerous, can only be explained on the ground of their ignorance of the evil consequences. Thus we see that it is not only the masses, but the educated and well informed who need to be protected from the results of their own folly.

I protest against the assistance that is accorded quackery by the entire press of our country. I believe that with a very few exceptions newspapers throughout this land will lend their advertising columns to the teaching of doctrines known to be false and for the promotion of the sale of drugs and appliances that are only intended to be used for criminal purposes. Men who are recognized and admitted to be quacks and impostors can, for the slightest compensation, secure the co-operation of and completely subsidize our press for the purpose of defrauding the public, and thus endanger the health and life of a community. That through the medium of the press charlatanry thrives is best evidenced by the fact that as a business proposition the efficacy of newspaper advertisement is recognized by quacks and their patronage continues unabated. Abortifacients of all kinds are daily brought to the attention of the public through the medium of the press; and when a paper knowingly advertises any drug or measure which on the face of it has for its purpose the accomplishment of a crime, judged from every law of morals, the proprietor of that paper is guilty of complicity in crime. That they salve their consciences and excuse their complicity by disowning responsibility for the results of what they term legitimate business, is but a puerile plea and is an admission on their part that for a monetary consideration the columns of their paper are open for any fraudulent accomplishment that is without the pale of the law. If the physician in his practice should advocate the employment of the drugs that are with full license advertised in our press it would be regarded as not only a violation of our statute, but of a higher ethical and moral law as well. What the physician can not and would not do is with impunity accomplished through the advertising columns of our papers; and though it is well understood that death is a frequent result of this disgraceful newspaper complicity, their columns continue to reek with this criminally vile, obscene and noxious effluvium. The efforts and teachings of a hundred thousand physicians are set at naught by this very pernicious practice, and yet it continues unabated. The responsibility is saddled on the ignorant people and the demoralizing and often sad spectacle which we as medical men witness as a result of this disgusting abuse, is set aside by the newspaper proprietor as something aside from his province and unpleasant to contemplate.

As sacred a duty as that we owe the public is that duty we owe our fellow practitioners, and he who isolates himself from his professional workers and is left to his own devices and endeavors, robs himself of the sweetest and most comforting reward of his efforts. To our medical societies is due a full measure of thanks for the spirit of good will and harmony that pervades our ranks to-day. Through their medium we are brought to realize the importance of unifying our interests, to think and act in common, and are taught to feel our mutual dependence on each other. In the hands of no others is a physician's reputation so safe as in the hands of his fellow workers. A physician's whole life is but the history of his accomplishments and endeavors, and no one can so sympathize with his efforts as his confrères.

We watch the physician as he begins his career; the shadows are long in the west, life, strength and commendable ambition are his and roseate dreams fill his fancy. Though alternately elated and disheartened by his successes and failures, he finds with each passing year a more complete reward for his honest efforts. But no matter what might be the measure of his success there is no reward to him so wholesome and pure as the hearty handshake, the friendly nod and blessed words of approval of an older physician. We follow him still further in life's great battle. Throughout every turmoil and strife the physician is found and his presence is inseparably linked with men's greatest sorrows and most perfect joys. Success as a physician may have crowned his efforts, popular adoration may be his, and the world unites in according him just praise for his accomplishments, yet no popular applause, however loud, can overrule the judgment of his fellow workers. Without their friendly council, good will and approval his success will count as naught and his life and reputation will be only a glittering fraud. We follow him still further as he stands in the dim shadows; his race is almost run; the best days of his life, his strength and vitality have been freely given for the betterment of his fellow man, and now the "frosty fingers of time have touched him and turned his locks into a snowy crown." Yet better than the contemplation of his past success the brightest star in all his firmament is the seal of approval set on his life by the members of his own profession.

Until medical men can live together in harmony and concord, until they learn to recognize and admit the good, and cover with the cloak of charity the faults of their fellow workers, then only can they prove their worthiness of the perfect trust and confidence of the laity in their altruism and disinterested motives. I acknowledge with deep humility that we are too prone to turn a willing ear to the tongue of slander and too prone to doubt the honor and purity of those who are most entitled to our perfect confidence. Yet I believe that our profession is on a more exalted plane to-day than ever before, and dissension has no rightful place in our ranks. Every discordant note that emanates from our medical societies and every estrangement between members of our profession serve but to justly disparage us in the public mind and lessen the respect and confidence that is accorded us.

There are most respectable citizens in our profession who are not members of our medical societies and whose standing among medical men is not what it should be, yet these men have in them all those elements which go to making reputable physicians. We owe it to our profession to use our utmost endeavor to induce these men to abandon their selfish and isolated course and to identify themselves with our association. There would be a mutual profit that would ensue to all in consequence of this, and a fraternal communion with men of exalted ethical principles would make of these men useful and honorable members of our body. With an increased knowledge of their fellow workers and increased appreciation of the commendable purposes of our association they would become better men and better physicians and, "like the stained web that whitens in the sun, grow pure by being purely shone upon."

In improving the tone of our profession we advance our material interests by proving to the public our worthiness of their trust and confidence. Merit and genuine worth will not long remain unrecognized and our only hope for a full recognition of our political requirements is based on a strict observance of professional ethics.

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CHOREA AND RHEUMATISM.

Probably no subject in medicine has been more discussed in recent years than that of the possible etiologic relationship between the simple chorea of childhood and acute articular rheumatism. Nevertheless, there is at the present time no subject in which there is more need for clinical observation and for the collection of valuable statistics by the general practitioner than in this problem of the possible connection between these two very familiar affections. At the recent meeting of the British Medical Association two meetings of the Section on Children's Diseases were taken up with the discussion of chorea and rheumatism, and some of the best special authorities in pediatrics took part in it. The report of the section meeting in the *British Medical Journal*[1] shows that while there is an almost universal agreement that chorea and rheumatism are frequently connected, it is now generally admitted that it is more because rheumatism is an infectious disease, with a liability to affect serous membranes, and consequently those of the brain also rather than because some specific action of the presumed microbe of rheumatism acts on the nervous system and sets up the convulsive movements we know as chorea.

Dr. Lees, in opening the discussion on rheumatism and chorea, said that while attacks of chorea are, in his experience, preceded by rheumatism less than once in three times, subsequent attacks of rheumatism occur in chorea patients in considerably more than one-half the cases. An attack of chorea, then, would seem in a sense to be the equivalent of an attack of acute articular rheumatism occurring particularly during the growing period in childhood when the nervous system is under the strain of a constant effort to keep up with its duty of providing innervation for the growing body. In the great majority of cases, Dr. Lees is inclined to consider chorea as a form of cerebral rheumatism. It is thought to affect not only the serous membrane, but also portions of the cortex, hence bringing about the explosions along motor nerve tracks that lead to the characteristic convulsive movements.

Following out this principle of the equivalency of rheumatism and chorea, Dr. Lees has found that the best possible remedies for chorea are the salicylates in what would ordinarily be considered forbiddingly large doses. He gives ten grains of sodium salicylate, with double this amount of sodium bicarbonate every two hours during the day and every three hours at night, so that the child gets altogether ten doses of the two remedies. The original hundred grains of sodium salicylate thus given each day is gradually increased to 150 grains a day, and finally to 200 grains, unless symptoms of salicylism, and especially the deep inspiration simulating the air hunger that occurs so often in diabetes should be noted. Without the combination with the alkali, salicylic poisoning is much more apt to occur, and seems to take the form of the so-called acidemia of diabetic coma.

Not many of the prominent English pediatrists would agree with the suggestion to give salicylates in such large doses as this, and Dr. Ashby, for instance, while confessing that chorea is very frequently associated with rheumatism and consequently should be helped by salicylic remedies, added that undoubtedly many cases of chorea would be seriously injured by large doses of such coal-tar products. He called attention particularly to the fact that chorea not infrequently occurs in overgrown anemic girls, apparently as a consequence of the lack of control over the motor nervous system in conditions in which the blood is lacking in important constituents. In these cases the salicylates are not only not advisable, but are absolutely contraindicated, quite as much as they are in cases of rheumatism after the acute febrile painful stage has passed and the patient is suffering from the intense anemia which develops so rapidly in many cases of acute articular rheumatism.

Dr. Poynton suggested that chorea is practically always due to a microbic cause. The microbe found in many cases is of the streptococcus group and resembles organisms known to occur in rheumatic conditions. Pure cultures of this microörganism when injected into animals have been known to produce choreic movements, and in certain cases also have given rise to joint lesions. These discoveries point to the fact that chorea is due either to focal lesions in the central nervous system of patients or to the fact that the toxins in certain persons whose nervous systems are not in stable condition have a selective action on the motor tract that leads to the nerve explosions represented peripherally by the choreic movements.

As a matter of fact, however, the whole discussion brings out the practical conclusion that the absolute connection between rheumatism and chorea is not yet demonstrated. One unexplained fact of great interest is that while rheumatism is more common in males, chorea is more frequent in females. Neurologists, too, point to the thoroughly accredited observation that a serious fright or some severe emotional strain may be followed by a frank attack of chorea which runs just the same course as the corresponding affection that occurs apparently as the equivalent of an attack of rheumatism. That there is some connection between infection and chorea there is very little doubt, though the infectious material is by no means necessarily limited to the so-

1. Brit. Med. Jour., Aug. 29, 1903. Abstract in THE JOURNAL A. M. A., Sept. 19, p. 750.

called rheumatic group. Other children's diseases may have as a sequel an attack of chorea and even such simple infections as a furuncle, or a whitlow may be followed by a regular attack of chorea. In a word, the subject is still open for significant observations, and as practically every practitioner is in a position to secure valuable data for the solution of the problem, it remains one of the most interesting in the field of clinical medicine.

SUGGESTIVE THERAPEUTICS V. HYPNOTISM.

The recommendations of the Mendel Commission of 1902 as regards the use of hypnotism are combated by Forel at considerable length.[1] He holds that hypnotism has a proper and very important place in therapeutics, and that its legitimate use should be a part of the instruction of the medical student. The lack of this he apparently considers a serious defect in the medical education of the day. THE JOURNAL has expressed its opinion at various times in regard to the therapeutic use of hypnotism, and, notwithstanding the high authority of Professor Forel, we can not agree with him as to its importance. We do not, of course, mean here to imply that suggestion is not of importance; suggestion in some way or another, consciously or unconsciously, is daily employed by every physician, and is the sole basis of the success of the Dowieites, Eddyites, etc. It has its limitations, however; there are limits to normal suggestibility, and it is altogether possible that even waking suggestion may have its perils in special cases. Nevertheless, it is a subject that deserves to be more studied by the profession, and when it can be used honestly it will often be found a valuable aid in treatment of a special class of cases.

It is not necessary or even expedient that because it is used successfully by humbugs that we should adopt their methods. No honest physician could pretend to the special magnetic or divine power which is the essential element of the success of charlatans of the pseudo-religious and mind cure variety. The final, as well as the immediate, results must be considered. Hypnotism, as we understand it, is another thing, though Forel considers it the same. The difference is more than one of degree; it is practically the difference between somnambulism and the waking state; hypnotism is a sort of induced trance state or somnambulism, and this is a pathologic rather than a normal condition. Hypnotism, as it is generally understood by the profession, and we believe the understanding is a correct one, is very much more than suggestion; it is the abnormal excitation of hysterical disturbances of consciousness and even what we may call epileptiform conditions of amnesia and, in some cases, double consciousness. Forel is hardly frank, therefore, when he says that sleep is a useful element in treatment, and our adding more or less of it to suggestion is legitimate; hypnotic trance conditions are not abnormal physiologic sleep, nor are they used as such by hypnotic therapeutists to any extent. Nor do we believe that he is correct in calling hypnotism harmless; its dangers have been repeatedly illustrated, and we think they often outweigh its possible advantages, even in skilled hands.

The history of hypnotism itself shows how little it can be relied on. It has been before the profession for the better part of a century, has had many advocates fully as enthusiastic as Professor Forel, and, while he and the other later investigators unquestionably understand it better and utilize it more scientifically than their predecessors, nevertheless they have not gained for it a satisfactory standing with the scientific medical profession, as the report of Professor Mendel's commission shows. The profession is, we believe, more than ever awake to the importance of suggestion, not only on account of the possibilities of its legitimate use, but also on account of its constant employment by quacks and impostors. It leaves hypnotism largely alone, and the number of those who employ it will, we think, be less in the future than in the past. It will doubtless continue to be employed by some special workers who will claim its advantages as they have in the past, and it will probably be useful in a limited number of cases, but we should dread to see its popularization as a therapeutic method. That Forel, Bramwell and others have seen no special bad effects from their careful and skilled use of hypnotism does not prove that it would not be a peril in other hands. Moreover, there is always in our minds the possibility that they do not look on the subject with an altogether impartial eye. That there have been serious effects from hypnotism is undeniable; many cases have been reported, notwithstanding the fact no one would naturally like to report evil results from such measures employed for therapeutic results. We believe that the opinion of the German Commission should carry more weight than the utterances of special advocates and enthusiastic workers in this special line, however eminent they may be.

1. Muenchener Med. Wochen., August 11.

THE DOCTORATE OF PHILOSOPHY IN MEDICAL SCIENCES.

Science recently published a review of the doctorates of philosophy conferred by American universities during the past six years which reveals some facts of interest in connection with medical education. Two hundred and sixty-six doctorates were conferred last year, which is the greatest number of any single year, but there is little evidence of growth in the numbers for the past six years, which are in order 234, 222, 239, 253, 216, 266. Doctorates in medicine are by no means the only ones that are "milled," for it was found that one unknown "university" in Indiana led all others, with a total of forty-five "Doctors of Philosophy." As this institution has no productive funds, and its total income from all sources was $4,500, the production of such doctorates at a cost of $100 a piece, not to mention the other degrees,

makes its position decidedly unique. Needless to say, *Science* has not included these forty-five "doctors."

Four-fifths of the degrees are conferred by seven universities, ranking in order as follows: Yale, Chicago, Harvard, Johns Hopkins, Columbia, Pennsylvania and Cornell. Just about equal numbers of degrees were awarded in science and in the "humanities," and what may seem astonishing to the scientist, there has been no appreciable gain by science on humanities in these past few years. Of particular interest to us, however, is the following table:

DOCTORATES CONFERRED IN THE SCIENCES.

	1898	1899	1900	1901	1902	1903	Total.
Chemistry	27	32	26	28	26	33	172
Physics	11	7	15	23	12	14	82
Psychology	18	15	9	13	8	16	79
Zoology	12	11	11	15	16	12	77
Mathematics	11	13	11	18	8	7	68
Botany	11	11	12	8	11	9	62
Geology	6	5	5	10	6	10	42
Physiology	4	1	4	1	8	8	26
Astronomy	3	2	4	5	2	4	20
Education	0	5	8	2	1	2	18
Sociology	0	5	3	3	4	2	17
Paleontology	0	4	2	1	0	2	9
Bacteriology	0	1	1	1	1	3	7
Anthropology	2	0	2	1	0	1	6
Anatomy	0	0	0	1	0	4	5
Agriculture	0	0	0	0	2	2	4
Engineering	0	0	0	1	0	3	4
Mineralogy	0	2	0	0	1	1	4
Pathology	0	0	0	0	0	3	3
Meteorology	0	1	0	0	0	0	1
Total	105	115	113	131	106	136	706

Here there is shown a most gratifying increase in the degrees in medical science. Physiology has graduated sixteen doctors in the last two years, against ten in the four years preceding. Of seven degrees in bacteriology three were given this year, while four of five degrees in anatomy were also given this year. Pathology makes its first appearance in the list with three degrees, although from a perusal of the titles of all the doctorate theses in science it seems that two of the three are really in bacteriologic subjects. This growth of degree-giving in those biologic sciences most intimately related to medicine is to be attributed to the growth of the spirit of a higher medical education, and is one of the encouraging signs of the times.

That anatomy and pathology have not been taught before in a way that might lead to graduate students taking them up as branches to be followed through the long stretches of labor that are required for the doctorate is regrettable, but that they are now considered as full departments of university work marks a much desired progress in medical education.

REMARKABLE FECUNDITY.

It is stated by one of our British contemporaries that a petition has been presented to the Italian government for a pension in favor of Signora Magdalena Grametta, who during twenty years of married life has been the mother of sixty-two children—fifty-nine boys and three girls. The details are not given, but before one would care to estimate the value to the state of such hyperfecundity, it would be interesting to know how many of these children survived. If the example were to be extensively followed, Malthusian ideas would undoubtedly become popular. The fact is an interesting one, however, in view of the allegations that are made as to the decreasing fecundity of the race in some countries. There seems to be no such defect in Italy, at least in exceptional cases.

KOCH'S RECENT EXPERIMENTS ON BOVINE TUBERCULOSIS.

Koch's experiments on the immunization of cattle against tuberculosis, which have been carried on for two years past, are reported by Neufeld.[1] The results of these experiments, the latter asserts, confirm Koch's statement of the non-identity of human and bovine tuberculosis, in fact, give the key to immunization research. It was possible in animals which were only capable of being affected by one toxin to produce immunity to this toxin by previous treatment with the other. The experiments were made with goats and asses, and later carried on in cattle. Some curious results in regard to the toxic dose of extract of tubercle bacilli were noted, but these will be described more fully in the abstract of the paper to be given in our next number. They find it impossible to produce immunity in guinea-pigs. The problem of producing immunity in man is somewhat different, but the results of these experiments are hopeful in their indications. The article is an interesting one and will undoubtedly receive considerable attention.

THE BRAIN WEIGHT OF THE JAPANESE.

It is not very long since someone stated, and the statement was generally quoted by the daily press, that the Japanese possessed the greatest brain weight of any modern race, and the natural inference was drawn that they would in time show their mastery. We have had few accurate data on which to base such a statement, and the one made may be taken as not specially authoritative. Recently, however, Professor Taguchi has been studying the brain weight of the Japanese and has given figures of the examination of some 597 subjects, which figures are analyzed by Dr. E. A. Spitzka in the last issue of *Science*.[2] Spitzka finds by these statistics that the Japanese certainly do show very respectable brain weights. He has used Professor Taguchi's data as to the relation between brain weight and stature, and, while the methods of tabulation differ to some extent, he finds that they correspond very closely with the figures given for the Germans, and are a little less than those given for the Szechs, as reported by Matiegka from some 306 specimens examined. Calculating also the number of grams per centimeter of the stature, the relative brain weight is about the same in the races mentioned, and only in the very small Japanese individuals is the ratio high. The relation of brain and body weight is not a reliable method, as Spitzka points out, since the mode of death and other factors materially influence the statistics. The figures seem to show that the brain of the Japanese grows more slowly in infancy and early youth than it does in the European, but the adult brain would compare favorably with that of the European of the same stature, and may be shown to be superior in this

1. Deutsche Med. Wochen., Sept. 10, 1903.
2. Science, Sept. 18, 1903.

respect to other races of the same general stature. Spitzka suggests that the facts are not of a little significance in relation to the recent progress of the Japanese.

SUICIDE IN THE UNITED STATES.

THE JOURNAL has previously noticed the communications published by Mr. Frederick Hoffman of the Prudential Life Insurance Company in the *Spectator* on the subject of suicides in the United States. In that journal, August 27, he gives a review of the suicide records of fifty of the principal cities in this country for 1902, with a comparison with the ten years preceding—1892 to 1901, inclusive. The record shows an increase in the rate during the year in twenty-eight towns, a decrease in twenty-one, and in one small town only was the ratio unchanged. The total gives the decided increase of from only twelve in 1890 to over seventeen per 100,000 of the population. Another table shows that the suicide rate has increased during the past thirteen years from twelve per 100,000 in 1890 to 1902. The gradual progressive increase would indicate that a still higher ratio may be reached in the future. To still further illustrate the importance of the subject Mr. Hoffman tabulates the suicides in New York City from 1804 to 1902, showing a marked increase during the last twenty years, though previous to that time there had been a fall which was quite marked between 1842 and 1868. The suicide rate during the first quarter of the century was much higher than during the second, while in the last one-half it has gone far beyond the earlier figures. What these figures indicate is perhaps a subject for some speculation; the great increase of urban population, the vast influence of the foreign element in our population, many of them coming from countries where suicide is much more prevalent than here, and the increasing stress of modern life and the arduousness of its conditions must all have their effect. They also show that in time of great national excitement, as during the 60's, there may be a decided fall in the suicide ratio to be made up for afterward, possibly as the later results of the special form of stress at that time. The figures Mr. Hoffman gives, as stated, are from fifty selected cities, probably those in which the suicide statistics were most available and most reliable. Still the omissions of such places as San Francisco, Denver and Kansas City are notable, and probably may have some influence on the general ratio. A large number of smaller towns are not included in the list, though fully as important and as large as some that are included. Taking it altogether, however, the statistics probably give us a fair showing as to the suicide ratio and its variations in the United States.

A CLERGYMAN'S DEFENSE OF ANIMAL EXPERIMENTATION.

While a few clergymen have committed themselves to the side of antivivisection, especially in Great Britain, there are many others of all churches who take the rational, and not the sentimental and pseudo-humane, view of the subject. Among the latter may be mentioned the Right Rev. Mgr. J. S. Vaughan, one of the most prominent prelates of the Roman Catholic Church in Great Britain. It is unnecessary for any one to bring out new arguments in favor of vivisection, but Monseigneur Vaughan puts the case, in a recent communication to an English periodical, the *Humane Review*, in a way that ought to be convincing. He says:

> Here is, let us say, an ordinary good-natured and able physician whom we will call Dr. X. His whole aim and object is to diminish pain and to allay suffering. It is not in his power to destroy it, therefore he directs his efforts to alleviate it. He knows that men are by far the most sensitive of sufferers. He knows that they are subject to certain painful diseases. He has good reason to think that a certain treatment would bring great relief, and perhaps even produce a cure. But his reasoning may be defective, and he can not ascertain with any degree of certainty whether his opinion be well founded unless and until he can test his theories by actual experiment. That is to say, he must actually apply the remedies. It is essential that he should make the experiment on a living organism of some kind. But on whom? Well, there are but two classes of creatures to choose from. He must make it either on a human being or else on a beast; either, let us say, on a sick child or on a rabbit. The antivivisectionist objects to all experiments on animals, and in effect answers, "The experiment must be made on the sick child, not on the rabbit!" And this is why we call the antivivisectionist cruel. We, on the contrary, hold that the experiment should be made on the rabbit or other beast, and not on the unfortunate sick child. Yet, on that account we are called cruel. Our reason for maintaining this view is, first, because the beast is less sensitive to pain. Secondly, because its loss of life, should the experiment prove abortive, is of far less consequence. Thirdly, because the child is our own very flesh and blood, and a member of our great human family, and has immeasurably greater claims on our pity. Fourthly, because God has given men domain over the beasts of the field.

The antivivisectionists have elevated their zoöphily above Christianity, and it is a satisfaction to have a champion of Christianity whose views of the scriptural side of the subject can not be questioned against this modern Brahminical nonsense which has nothing Christian in it. It is inhumane in its very essence. While God, as we are told by the Savior, takes account of every sparrow that falls, yet we are told in the same connection: "Ye are of more value than many sparrows"—a passage we fear the antivivisectionists would like to have blotted out of Holy Writ.

Medical News.

ILLINOIS.

Personal.—Dr. Everett H. Butterfield, Ottawa, has been reelected physician of La Salle County.——Dr. Homer A. Millard, Minonk, sailed for Germany, September 15.

Faith Cure Case Remanded.—The Appellate Court, fourth district, has rendered a decision in the case of the Board of Health of Illinois versus S. E. Peden of Centralia, who was charged with practicing medicine without a license, and who was tried twice in Marion County. He was first tried and acquitted before a justice of the peace, then before the County Court, with the same result. The State Board of Health then took the case to the Appellate Court, which reversed and remanded it on account of defective instructions, and it will go back to the County Court for another trial. Peden's defense is that his practice is simply laying on of hands, which he contends is in no sense the practice of medicine.

Chicago.

University of Illinois Medical Department.—The regular session of the College of Physicians and Surgeons opens October 1 with an address by Dr. George P. Dreyer.

Fewer Deaths.—The deaths for the week ended September 19 were fewer than in that preceding, being 496, against 504. The death rate per 1,000 per annum was 12.97 per 1,000,

against 13.94 for the week before, and 13.83 for the corresponding week of 1902.

Rush Medical College.—The graduating exercises will be held October 6. The address will be delivered by Prof. Charles Scott Sherrington, the eminent physiologist of Liverpool.——Dr. Frank W. Lynch, formerly of the department of obstetrics and gynecology at Johns Hopkins University, will assume his duties on the staff of the college on October 5.

Personal.—Dr. A. E. Halstead has been appointed attending surgeon to St. Luke's Hospital.——Dr. and Mrs. Daniel R. Brower, Jr., sailed for Europe, September 22, on the *Kaiser Wilhelm II.*——Dr. James Nevins Hyde has returned after a summer on the coast of Maine.——Dr. and Mrs. R. D. Macarthur have returned from Old Orchard Beach.——Dr. E. Fletcher Ingals, who has been rusticating in Connecticut for the last two months, will return to Chicago to-morrow.

Examination for Assistant Bacteriologist.—The Civil Service Commission of Chicago will hold an original entrance examination for the position of assistant bacteriologist of the health department, Oct. 22, 1903, in room 400, City Hall. The salary attached to the position is $1,000. Those taking the examination must have been residents of Chicago for one year, and must file application prior to the examination. Application blanks may be procured by addressing T. J. Corcoran, secretary Civil Service Commission, room 400, City Hall.

IOWA.

Withdraws Resignation.—Dr. Lewis Schooler, Des Moines, has reconsidered his action taken a short time ago and has resumed the chair of surgery in the medical department of Drake University.

Physician Assaulted.—Dr. Edgar L. Bay, Eddyville, while returning from a call in the country, was struck on the head and stunned by an unknown individual, whose motive is supposed to have been robbery.

Colleges Begin Work.—Keokuk Medical College began its work for the year, September 15, with an address by Dr. Alonzo B. Hughes.——Sioux City College of Medicine opened September 8 with an address by Dr. Charles M. Wade.

Many Not Registered.—The county recorder of Woodbury County has discovered that from 10 to 20 per cent. of the practitioners of medicine in that county have not registered their certificates with the county recorder, as required by law.

Reality was Disappointment.—Because an enterprising advertising practitioner of Des Moines used a picture of the state house on his circulars and pamphlets, thereby creating the impression that his sanatorium had five gilded domes and countless windows, he has been indicted on the charge of obtaining money under false pretences.

MICHIGAN.

Press Committee Appointed.—The Wayne County Medical Society has decided to appoint a press committee, whose duty it shall be to prepare the news of the society in digestible form for the lay press.

Personal.—Dr. Robert E. Cooper, Plymouth, has typhoid fever, and has been removed to Harper Hospital, Detroit.——Dr. Jerry M. Jones, Bay City, charged with failure to report communicable diseases, has been discharged.

Communicable Diseases.—Meningitis was reported present during August at 3 places; whooping cough at 36 places; measles at 46 places; diphtheria at 49 places; smallpox at 61 places; scarlet fever at 92 places; typhoid fever at 127 places; and consumption at 226 places. Meningitis was reported present at 2 places less; whooping cough at 4 places less; measles at 39 places less; diphtheria at 6 places less; smallpox at 20 places less; scarlet fever at 4 places less; typhoid fever at 48 places more, and consumption at 10 places more, in August, than in the preceding month.

August Mortality of Michigan.—The total number of deaths in Michigan during August was 2,800, an increase of 147 over the preceding month. The death rate was 13.3 per 1,000 per annum. There were 688 deaths of infants under 1 year, 211 deaths of children from 1 to 4 years, and 697 deaths over 65 years. Important causes of death were as follows: Tuberculosis, 187; typhoid fever, 44; diphtheria, 37; scarlet fever, 16; measles, 2; whooping cough, 37; pneumonia, 100; diarrhea and enteritis, under 2 years, 386; cancer, 157; accidents and violence, 240, including 32 deaths from drowning and 7 deaths from lightning. There were 2 deaths from smallpox.

Comparative Morbidity.—For August, compared with the preceding month, diarrhea, cholera morbus, dysentery, cholera infantum, typhoid fever and inflammation of bowels were more prevalent; and pneumonia, measles and inflammation of brain were less prevalent. For the same month, compared with the average for August in the 10 years previous, pleuritis, tonsillitis, diphtheria, scarlet fever and smallpox were more than usually prevalent; and diarrhea, cholera morbus, dysentery, consumption, cholera infantum, intermittent fever, inflammation of bowels, remittent fever, erysipelas, inflammation of brain, and meningitis were less than usually prevalent. Diarrhea, dysentery, cholera infantum and cholera morbus are usually most prevalent during July, August, September and October, but these diseases were from twenty-six to forty-five per cent. less prevalent than usual in the August just passed.

MISSOURI.

Failed to Register.—The first fruits of the crusade against unregistered physicians in St. Louis were apparent when 85 practitioners were cited to appear before Judge Tracy, on September 18, to explain why they had not complied with the law.

Results of Flood.—Since August 1, 30 deaths from typhoid fever have been reported in Kansas City, and about 75 cases are under treatment in the various hospitals of the city. It is impossible to estimate the additional number of patients under treatment at their homes.

Personal.—Dr. Horatio S. Jones, Kansas City, was recently thrown from a cable car and injured his spine.——Dr. Lemuel T. Hall, superintendent of State Hospital for Insane, No. 5, Farmington, has resigned, and Dr. Frank L. Keith has been appointed temporarily to fill the position.——Dr. John M. Doyle, St. Joseph, who was operated on for appendicitis, September 9, is securely convalescent.

College Year Opens.—Ensworth Medical College, St. Joseph, opened for its twenty-eighth year, September 2.——Central Medical College, St. Joseph, held its tenth annual opening exercises, September 7. Addresses were made by Dr. Thompson E. Potter, president, and Dr. O. Beverly Campbell.——Medico-Chirurgical College, Kansas City, opened its seventh annual term, September 7, with an address by the dean, Dr. George O. Coffin.——Kansas City Medical College began its thirty-fifth year of work on September 9.

NEW JERSEY.

Medical Staff Want Interne.—The board of governors of North Hudson Hospital have decided that an interne should be secured for the institution at a salary of $200 a year. One half of this amount the medical staff has agreed to pay.

New Eye and Ear Infirmary.—A new building to cost $50,000 will be ready next year for the Newark Charitable Eye and Ear Infirmary. The building is to be fireproof, will accommodate 30 in-patients, and an unlimited number of dispensary cases.

Personal.—Dr. John C. Applegate, Bridgton, has moved to Philadelphia, where he has accepted the chair of obstetrics in Temple Medical College, and the position of obstetrician to the Samaritan Hospital.——Dr. Richard R. Rogers, Trenton, on the occasion of his eightieth birthday, was tendered a reception by 300 of his friends, and was presented with a reclining chair by the members of the city board of health.

NEW YORK.

Cornerstone Laid.—Bishop McDonnell laid the cornerstone of the new hospital being erected by the Little Sisters of the Order of St. Dominic, at Jamaica, September 17.

Temple Again.—Franklin Stewart Temple, who attained unenviable notoriety by reason of his connection with "Antonius" the faker of Buffalo, has visited Jamestown, and certain individuals who had been under his care there are now asking the police to try and locate the healer.

Personal.—Dr. Augustus G. Pohlman, Buffalo, has been appointed assistant professor of anatomy in Johns Hopkins University, Baltimore.——Dr. William L. Russell, Willard, has been appointed Medical Inspector of Institutions for the Insane.——Dr. Richard H. Hutchings, assistant physician at the St. Lawrence State Hospital for the Insane, Ogdensburg, has been appointed superintendent, vice Dr. William Mabon, resigned.

New York City.

Sold Free **Antitoxin.**—Dr. Anton M. Lacina, charged with selling antitoxin furnished him without charge for use of the poor, pleaded guilty and sentence was suspended.

Suicide on the **Increase.**—In 1902 there was 772 suicides in Greater New York. Ten years ago the number was about 50 per cent. less. Of the suicides 196 were women, 73 of whom were native-born. In Manhattan and the Bronx the suicide rate per 100,000 has increased from 14 to 22 in the last ten years.

The New **Gouverneur Hospital.**—Plans for the new hospital have been filed. They provide for the erection of the additional west wing to the present five-story and basement main building, also for a one-story rear extension into the courtyard, and for the erection of a two-story ambulance station, with a stable annex. The new building, when finished and furnished, will cost the city about $500,000. The additional wing and extension are to cost $250,000 and the ambulance station will cost an extra $25,000.

Buffalo.

Warning to **Milkmen.**—The health commissioner has sent each milkman and dairyman of Buffalo a warning note on milk adulteration and adulterants. Any milkman who is guilty of adulterating milk or cream will immediately have his license revoked.

Personal.—Dr. Matthew D. Mann has returned from the lake shore.——Dr. Irving P. Lyon has returned from the Adirondacks.——Dr. Dewitt Sherman has returned from Bar Harbor, Maine.——Dr. Irving M. Snow has returned from abroad.——Dr. John Woodruff is in the Bermudas.——Dr. Frederic Zingsheim is seriously ill with typhoid fever.——Dr. Gustav A. Hitzel has returned from Atlantic City.

Another **Eddyite Death.**—A girl of 14 died of diphtheria without medical attendance, having been treated by an Eddyite, and in order to comply with the law Dr. J. L. McAdam was called in shortly before death. He refused to issue a certificate, and referred the case over to Health Commissioner Greene, who has given it, with all the facts bearing on the case, into the hands of the district attorney for prosecution.

August **Mortality.**—The monthly report of the department of health for August shows an annual mortality rate of 16.98 per 1,000. Among the principal causes of death are: Consumption, 37; cerebrospinal meningitis, 4; cholera infantum, 57; diphtheria, 14; measles, 13; typhoid fever, 9; debility, 35; cancer, 26; apoplexy, 19; valvular heart disease, 13; pneumonia, 20; appendicitis, 11; cirrhosis of the liver, 8; diarrhea, 14; enterocolitis, 12; gastroenteritis, 15; nephritis, 23, and violence, 46. The total deaths for August, 1903, were 538, as compared to 520 for August, 1902.

OHIO.

Adjudged **Insane.**—Dr. Patten McConnell, Arnold, has been adjudged insane and ordered to be committed to the State Hospital.

Personal.—Dr. Francis M. Smallwood, Chillicothe, was stricken with paralysis while crossing Saginaw Bay.——Dr. Ernest C. Voltz, Chili, attempted suicide by poison recently, but an overdose saved him.

The Reeve **Anniversary.**—The Sisters of St. Elizabeth Hospital, Dayton, gave a dinner to the staff, September 7, in honor of the twenty-fifth anniversary of Dr. John C. Reeve's services as chief of staff.

In the **Hands of the Law.**—O. P. Cooper was fined $100 and costs at Uhrichsville for practicing medicine without a license.——Dr. Maurice Smith, Massillon, was recently fined $10 and costs for failing to report births and deaths as provided by law.——Warrants have been issued at the instance of the Lorain County Medical Society for the arrest of Mrs. A. Chapel, Mrs. Eva Sokol and Mrs. Mary Miskien, charged with practicing midwifery without license.

College **Openings.**—Miami Medical College will open as a co-educational institution, October 1.——Ohio Medical University, Columbus, opened September 16; Dr. James U. Barnhill presided.——The forty-eighth year's work of Starling Medical College began with a clinic by Dr. Starling Loving, September 16.——Cleveland College of Physicians and Surgeons opened for the year with an address by Dr. Samuel W. Kelley, on "Medical Students I Have Known."——Toledo Medical College opened for the year on September 24.

PENNSYLVANIA.

Philadelphia.

Child Labor.—Believing that the child labor law is grossly violated in the city, Director of Public Safety Smyth has instructed police lieutenants to ascertain where children under fourteen years of age are employed in stores, factories and mercantile places.

New Building Dedicated.—October 4 formal exercises will mark the dedication of the three new buildings of the Jewish Hospital. These buildings are the Eisner Home for Nurses, already occupied; the Loeb Memorial Operating Building, and the Guggenheim Private Hospital. The latter two will be ready for use within a few weeks after their dedication. The hospital grounds comprise twenty-two acres situated on the Old York Road, containing in all fourteen buildings.

Colleges Open.—Jefferson Medical College was formally opened September 24, with an address by the president of the board of trustees, Hon. William Potter.——All the departments of the University of Pennsylvania, including the medical, were opened September 25. Provost Harrison made an address.——The Medico-Chirurgical College will open September 28, Dr. Geo. H. Meeker, professor of chemistry, delivering the opening lecture.——Class work was resumed at the Woman's Medical College, September 23, there being no formal opening address.

The Typhoid Situation.—New cases of typhoid fever numbering 82 were reported for the week ended September 19, a decrease of 53 from the previous week. Seventy-eight cases have been reported from the Twenty-first ward since August 1 The very large number of cases in this section has led to a special investigation of the cause by Chief Abbott of the bureau of health, with the resulting report that sewage conditions were in many places bad, but that, of the victims in this section, over fifty per cent. were found to have purchased their milk from one dealer. On further investigation, it was found that within the last few months three members of the family of this dairyman had had the disease. On the reasonable assumption that the milk handled by the dealer had been accidentally contaminated, he was ordered to discontinue the sale of milk until thorough disinfecting measures had been carried out.

Segregation.—A handsome and roomy brick and cement building has just been erected in the Philadelphia Hospital grounds in which are to be placed the families of patients suffering from contagious diseases, except smallpox. The patient himself will be taken to the Municipal Hospital, while his relatives are thoroughly sterilized in the new building. There are fifty rooms in the house, each ten feet square, for the accommodation of the occupants, and the receiving ward is separated from the living rooms by porcelain doors. The number of rooms allotted to a family will vary in accordance with its size, but all the families brought there will be made comfortable at the city's expense during the period of their detention. Meanwhile the home of the family will be in the hands of the board of health, and formalin gas diffused through the house for twenty-four hours. In case the patient is suffering from smallpox his family will be taken to the Municipal Hospital with him.

Phipps Institute Lectures.—The Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis has arranged for the coming fall and winter series of lectures by well-known physicians on the various phases of tuberculosis. Some of these lectures will be more or less popular in character and all will be free to the public. The auditorium of the Witherspoon Hall at Juniper and Walnut streets, Philadelphia, has been selected for the purpose, having a seating capacity of nearly twelve hundred people. A cordial invitation is extended to the profession in general to attend these lectures. The first lecture will be given by Dr. E. L. Trudeau of Saranac Lake, New York, during the last week in October, his subject being "The History of the Development of the Tuberculosis Work at Saranac Lake." The following additions to the staff have been made: Dr. M. P. Ravenel has been appointed assistant medical director and chief of the laboratory; Dr. E. A. Shumway, ophthalmologist, and Dr. J. F. Wallis, dermatologist.

Assistant Chiefs Appointed.—Each visiting physician to the Philadelphia Hospital has recently been given the privilege of sending, at times, a representative to look after his wards. Following are the assistants appointed, known as assistant chiefs; Assistant physicians—Drs. B. F. Stahl, Norman G. Gyn, John Da Costa, John H. Cruice, R. H. M. Landis, William

Pepper, H. C. Wood, Jr., J. S. Evans and J. N. Henry; assistant surgeons—Drs. W. P. Hearn, M. B. Miller, R. H. Loux, M. P. Warmouth, J. B. Carnett, D. G. Metheny and T. T. Thomas; assistant obstetricians—Drs. Stricker Coles, J. C. Hirst, P. Brook Bland, E. P. Bainbridge, W. R. Nicholson, M. W. Griscom, and A. P. Berg; assistant neurologists—Drs. A. Gordon, J. W. McConnell, L. C. Peter, D. J. McCarthy, T. H. Weisenberg, and H. Carncross; assistant ophthalmologists—Drs. E. A. Shumway, J. C. Knipe, W. M. Sweet and A. R. Renninger; assistant dermatologists—Drs. E. J. Stout, S. H. Brown and H. J. Smith; assistant pathologists—Drs. John Funke, G. McConnel and R. M. Pearce; assistant laryngologists—Drs. Ralph Butler, M. W. Hinkle and W. G. B. Harland; assistant orthopedic surgeons—Drs. T. J. Rugh and Edward B. Hodge, and assistant pediatrists—Drs. A. H. Graham, Harry Lowenberg, Charles A. Fife and J. H. McKee.

UTAH.

New Isolation Hospital.—A new smallpox house has been erected at Salt Lake City to replace the building which was burned a short time before.

Fire in Hospital.—Heroic work by nurses and attendants prevented loss of life in a fire which damaged the Keogh-Wright Hospital, Salt Lake City, to the extent of $10,000, September 15.

August Vital Statistics.—During August 72 deaths were reported in Salt Lake City, equivalent to an annual death-rate of 11.52 per 1,000. During the same period 134 births were reported. Typhoid fever was multiplied seven-fold, 75 cases being reported during the month, with 2 deaths.

School Children's Diseases and Deaths.—For the year 1902-1903 Dr. Eugene W. Whitney, Salt Lake City, medical inspector of city schools, reports 114 cases of smallpox, 142 of diphtheria, and 110 of scarlet fever. Diphtheria caused 29 deaths; typhoid fever, meningitis and respiratory diseases, each 6; digestive and heart diseases, each 5; accident 3, and scarlet fever, 2. Defects revealed by inspection were: defective teeth, 260; defective vision, 284; enlarged tonsils, 128; mouth breathing, 25, and vermin, 52. Only one out of 45 had any eye disease.

GENERAL.

Plague in Manila.—Bubonic plague is reported in Manila's environs to the number of 100 cases and 80 deaths. Cholera is prevalent in all parts of the islands.

Guest of the Section on Ophthalmology.—Dr. Simeon Snell, Sheffield, England, has accepted the invitation to be the guest of the Section on Ophthalmology of the American Medical Association at the next session—Atlantic City, June 7 to 10, 1904. This news will be appreciated by ophthalmologists.

Hawaii Wars on Mosquitoes.—The endeavor to rid Honolulu and vicinity of the mosquito scourge is being pushed. Stagnant water is being removed and the edges of all streams and ponds are being freed of vegetation to enable the fish to feed there. Public meetings are held to instruct the people in prophylaxis.

Much Yellow Fever in Mexico.—At the city of Linares, Mexico, are reported 600 cases of yellow fever. The mortality is severe. The disease has not yet reached Monterey. Quarantine is strict. Monterey protests against quarantine, but the United States officials are determined to be on the safe side. Linares is almost isolated and business is nearly at a standstill.

Smallpox on the "Sherman."—A case of smallpox was diagnosed, August 1, on the transport *Sherman* at Manila. The ship was at once disinfected and proceeded on her way to Mindanao. The ship surgeon considers the source of the infection was a suit of clothes which was issued to a private in the Seventeenth Infantry in the state of Washington shortly before the transport sailed. The man wore the uniform to make a call on a young woman who had smallpox, and then packed away the uniform till he reached Manila. Here he used it again and received the infection.

CANADA.

The Opening of the New Medical Buildings of Toronto.—The first session of the newly amalgamated medical faculties of Toronto and Trinity will begin October 1, when the fine new medical buildings will be opened.

Montreal General Hospital.—At the regular quarterly meeting held last week, a memorial to the late Dr. Wyatt Johnston was discussed and referred to the committee of management. The ordinary receipts from Jan. 1 to June 30, 1903, amounted to $56,540, and the expenditures to $50,728. In addition to the ordinary income there has been received during the six months legacies amounting to $18,475. Improvements have been made to the extent of nearly $3,000.

Provision for Clinical Study of Infectious Diseases in Toronto.—The medical health officer of Toronto, Dr. Charles Sheard, who is also professor of preventive medicine in the amalgamated medical faculties of Toronto and Trinity, is making arrangements whereby fourth year students in medicine will be given clinical instruction in infectious and contagious diseases. This is a step which medical students at Toronto will very much appreciate as heretofore students have had to go out into practice without ever having seen a case of scarlet fever or diphtheria.

Lady Minto's Hospital Scheme.—Lady Minto addressed a meeting of the citizens of Vancouver, B. C., September 10, in which she outlined her cottage hospital scheme. Learning of the long distances many injured persons had to journey before securing medical aid, the plan was conceived that cottage hospitals established at convenient centers would do much toward relieving this suffering and distress. The Lady Minto Cottage Hospital Fund was started and rapidly grew until at the present time eleven of these hospitals have been established, scattered from the Atlantic to the Pacific oceans. In British Columbia there are three. An endowment fund yielding $5,000 annually is looked for. Already $100,000 has been received from Toronto, Ottawa and Montreal, and but $25,000 more is required.

Vaccinations in Montreal.—The Montreal Health Department has just completed a report of much interest to the citizens of that place. It shows an enormous increase in the number of vaccinations in the past few years. In 1902 the total number of vaccinations was 96,796, divided as follows: In schools, 52,301; in factories, 44,495. Another report shows the vaccinations by years since 1878, in which year there were 3,273. In 1885, when the smallpox was epidemic there, the number was 26,150. In 1895 the number was 2,872; in 1901 the number was 36,976. A very surprising and instructive table, "Smallpox vs. Vaccination," shows that out of 503 cases of smallpox, no less than 443 were never vaccinated. The reason for there being such an enormous increase in vaccinations for 1902 was on account of the compulsory by-law requiring factories, railways, schools and public institutions to exact vaccination certificates from those they employ or receive.

FOREIGN.

Study Tropical Diseases in Africa.—Drs. Dutton, Tod and Christy, of the Liverpool School of Tropical Medicine, sailed from Southampton, England, September 18, for Africa to study the sleeping sickness and other tropical diseases in the Congo River region.

Declining Birth Rate in Prussia.—In 1876 the birth rate per 1,000 in Prussia was 40.9, while in 1901 it had declined to 36.52. That of Berlin has dropped from 46 in 1876 to 26.68 in 1901. In 349 districts the birth rate has constantly declined, while in 210 it has increased. The latter are country districts and all in the west.

Cancer Asylum at Moscow.—This new institution for cancer research—the first of its kind in Russia—was duly completed and opened September 1. It has accommodations at present for sixty patients, and will soon receive a hundred. The expense of construction was nearly $150,000, given by a wealthy Moscow merchant. The building contains operating rooms and an amphitheater for demonstrations.

International Congress for School Hygiene.—This congress will be held at Nuremberg, April 4 to 9, 1904. Communications must be sent to the secretary, Dr. Paul Schubert, Nuremberg, before December 15, 1903. On account of the limited accommodations of this quaint old city those intending to attend the congress are requested to notify Dr. E. Stich as soon as possible in order that quarters may be reserved for them. The fee for the congress is $5, to be paid to the treasurer, Mr. Emil Hopf, 17 Blumenstrasse, Nuremberg.

Campaign Against Malaria in Italy.—The *Riforma Medica* states that quinin was administered regularly to 923 persons in the hotbeds of malaria during 1902, and only 44, that is 4.6 per cent., contracted malaria and the cases were mild. In the corresponding groups of persons not taking the quinin, but otherwise under the same conditions, from 18 to 82 per cent.

contracted the disease, an average of 50 per cent. It adds that it has been officially calculated that at an expense of $8,000,000 a year it might be possible in the course of ten years to banish the last case of malaria from Italian soil.

Campaign Against Charlatans in Germany.—Magdeburg, Germany, has had 29 suits against charlatans in the courts during a single year recently. The charge was swindling in 10, personal injury in 2, death from criminal practices in 1, assumption of an unjustified title in 3, and infraction of the police regulations in the remainder. The Prussian and other states have decided to hold the advertisement editors of the press responsible for charlatan ads which promise cures impossible to realize or advertise articles known to be injurious. The editor of the *Osnabrücker Tageblatt* was recently summoned and fined $1.25 on two counts. One was for publishing an ad which lauded a truss without a spring, under the heading "No more hernias." The other advertised a certain eye water for weak eyes claiming that glasses would not be needed longer after two to four weeks' use of the water. The cases were appealed and the higher court confirmed the constitutionality of the decisions. The Carlsruhe board of health has issued a warning to the public in regard to a powder advertised to cure epilepsy in three days. It stated that the powder contained artemisia, which used to be a popular remedy against hysteric convulsions, but is powerless in genuine epilepsy, and that the price charged is extremely exorbitant.

Ankylostomiasis in Western Europe.—The French authorities have been conducting investigations which show that ankylostomiasis has not yet invaded France. Belgium is affected and energetic measures have been taken to stamp out the infection which was first imported into Germany and Belgium by the workmen returning from the construction of the Saint-Gothard tunnel in Switzerland. The Belgian government announced that it did not have the means to undertake prophylactic measures, and the city council of Liège, the point most affected, assumed the task in 1899. It appropriated $4,000 a year for examinations and small pensions to be given to affected persons, hoping in this way to induce the miners to declare the presence of the parasites more promptly. In addition to this, a special dispensary and hospital was established last year for those affected. This not only serves to keep the patients under surveillance during treatment, but is valuable as a means of isolating them and sterilizing the dejecta which otherwise would be a menace to others. The course at the hospital is also a training in hygienic and prophylactic measures so that the discharged patient is able to warn and instruct his comrades. The latest report from Bochum in Germany states that 50,000 out of the 250,000 miners there are affected with the parasite.

LONDON LETTER.

Report of the Commission on Dysentery and Typhoid Fever in the South African War.

In August, 1900, a commission consisting of Colonel Notter, Lieutenant-Colonel Bruce and Dr. W. J. R. Simpson was appointed to investigate the outbreak of dysentery and typhoid fever, which occurred in the South African War. It has just issued a valuable report. To Colonel Bruce was allotted the laboratory work. Regarding the various organisms held to be causative of dysentery his conclusions are mainly negative. He found no relation to amebæ or other species of organism nor any relation between dysentery and typhoid fever. Dr. Simpson fully describes the outbreaks of these diseases. He shows how the very insanitary environment as regards drainage, soil, disposal of excreta, and water-supply furnished ample sources for their spread, and points out how the flies swarmed from the latrines to the nearest unprotected food supply. The total number of cases of dysentery was as follows: first year, 11,143, with 546 deaths, a percentage of 4.9; second year, 13,131, with 427 deaths, a percentage of 3.2. Of typhoid fever there were in the first year 15,655 cases, with 3,647 deaths, a percentage of 23.2; in the second year 15,463 cases, with 2,530 deaths, a percentage of 16.3. The comparative absence of the fatal dysentery which usually attacks armies in the field was probably due to the excellent food arrangements, the soldiers obtaining their rations perfectly fresh and thoroughly cooked. The chief cause of dysentery was probably the drinking of surface water, especially the water of rivers, such as the Orange and Modder, holding in suspension a large amount of organic matter. Dr. Simpson points out a defect of organization: there was no specially trained and organized executive by which the recommendations made to the commanding officer of the various units could be carried out. This was the result of the persistent ignoring, as far as possible, of the medical corps by the military authorities. Dr. Simpson recommends that the medical corps should be divided into (1) a medical branch and (2) a health branch, and that the latter should be specially trained in preventive medicine.

The Anti-Mosquito Campaign in Egypt.

Major Ross has received a report that the anti-mosquito campaign, commenced less than a year ago by the Suez Canal Company (referred to in THE JOURNAL) and carried out according to his instructions, has been remarkably successful. The town of Ismailia is practically free from mosquitoes, which only a short time ago were very abundant. Even mosquito nets can be almost dispensed with, and people can sleep without being bitten. Two marshy swamps on the northeast of the town have been filled up with sand and a third one will soon be dealt with. It will be drained by a pipe 22 cm. in diameter which will convey away the water. A gang of 180 men are employed in filling up pools, moving the coarse grass and undergrowth, and clearing the numerous small channels in connection with the main canal. When they first commenced operations they were worried by swarms of mosquitoes toward evening, but scarcely any are seen now. The statistics of malaria in Ismailia show a remarkable improvement. From January 1 to June 30 of this year there were only 3 cases in hospital, against 52 for the same period last year and throughout Ismailia there were 569 cases from January 1 to May 30 in 1902, against 72 for the same period of this year.

Report of the Royal Commission on the South African War.

This report, which has just been issued, may be regarded as the last word on the so-called "hospital scandals," which caused so much sensation during the war. It clearly shows that before the outbreak of hostilities the military authorities overruled the demand of the surgeon-general for more men. He represented to them that the medical establishment was not even equal to the requirements of peace. When the war broke out practically the whole of the Army Medical Corps, officers and men, was exhausted in supplying the First Army Corps, and in manning the base and stationary hospitals. When, therefore, the Second Army Corps followed, assistance had to be obtained from civilians. Altogether 8,500 men were sent out, but barely a quarter of these were trained Army Medical Corps men. The commissioners attempted to obtain an idea of the percentage of medical strength which a force in the field required. Professor Ogston, who had studied the statistics of modern wars, said that the Medical Department should form about 5 per cent. of the strength of a force, but Surgeon-General Jameson thought that under favorable circumstances 2½ per cent. was sufficient. This was the percentage adopted by the War Office before the war. Including voluntary and outside assistance the medical strength during the war seems to have been from 3 to 4 per cent. of the total forces. The difficulty was in a war conducted over so large an area to secure that the medical personnel should be distributed in accordance with the need of localities or occasions. The most notable example of failure in this respect was the outbreak of typhoid fever at Bloemfontein. One great defect was pointed out: the army surgeon in times of peace had very little opportunity of acquiring surgical experience. The British system was unfavorably contrasted with the German. In Germany the military hospitals are larger and better managed, and every army surgeon can apply at short intervals to be admitted to the practice of civil hospitals. It is believed that the recent sweeping reforms in the service will remedy these defects.

Correspondence.

Health Resorts—The Patient—Home and Resident Physicians.

HOT SPRINGS, ARK., Sept. 5, 1903.

To the Editor:—The number of people visiting health resorts increases yearly. Among them are those suffering from chronic ailments and whose search is strictly for health; in such cases the question arises, how and under what circumstances will the patient derive the greatest benefit? Without a doubt the attending physician at the patient's home has the key to the situation, and it is on this basis that I formulate my deductions.

Dr. James K. Crook, in an article read before the section on general medicine of the New York Academy of Medicine, May 20, 1902, stated that we have within our borders springs that equal and excel those of Europe, with the exception of the sulphated salines, yet this is a matter not generally known, and one to which but little attention has been given by the general worker in medicine. Frequently is it the case that after a patient has been a sufferer for a long time with some chronic malady that a change of climate, surroundings, probably the advisability of a stay at a health resort are considered, either by the patient, the physician, or by both. It is at this time that the physician's help is most needed, his knowledge of the case reinforced by the perusal of literature on health resorts should make him, not the patient, the dictator. The climate, natural advantages, conveniences, and any special virtues of a resort should be thoroughly inquired into and if literature on this subject is not at hand, correspondence with physicians at the contemplated resorts will elicit what is sought after.

Without entering into any detailed discussion I will try to formulate a few definite rules that will tend to give the patient the greatest and best results obtainable:

1. The home physician and the patient should consult on the advisability of visiting a health resort as carefully as the first consultation on the case.

2. The physician should designate the resort to which the patient is to be sent, but only after a careful review of the benefits to be obtained.

3. The home physician should then correspond with a physician residing at the resort chosen, stating the case and requesting any information that may be of value.

4. On sending the patient, he should be given a letter to some resident physician. The case history up to the time of the patient's departure should be concisely and accurately stated, citing advantages and failures of various treatments, any especial idiosyncrasies of the case, etc. This answers the purpose of a consultation for the good of the patient and will frequently prevent the loss of valuable time to the latter and avoid the retracing of work that has proven a failure.

5. The resort practitioner must strive in conjunction with the home physician, through the history sent him, to give the patient every advantage of Nature's resources.

6. When the patient returns, an accurate account should be sent to the home physician, giving full details, so the latter may be thoroughly acquainted with the treatment had while away.

7. The two physicians should work in conjunction on all cases during the patient's stay and the one principal point, the welfare of the patient, should never be lost sight of.

If the above rules were more carefully adhered to, fewer invalids would take it on themselves to seek for health at some resort chosen on a mere empirical basis. The resort physician would thus be placed in immediate contact with the case, and as the question of confidence in the former by the latter is of paramount importance, an advantage point is already gained, the value of which is unmeasurable. It would tend to place our resorts on a higher standard, and before the expiration of a great while the value of a perfect understanding for the good of the patient would be as well recognized here as abroad.

It is the duty of every physician to assist and strive for the welfare of his patients; why, therefore, if they insist and feel as though benefits might be derived elsewhere, does he allow them to go unrecommended and unprepared? The American Medical Association has gathered within its ranks many of the reputable physicians of this country; the present standard of requirement of admission should certainly be sufficient evidence of the good character and professional attainments of its members; every resort in this country is represented by some physicians affiliated with this Association, and the acquiring of the names is but a matter of a few days at most. We all owe our patients our best judgment, and what has been stated above is certainly not a shortcoming in that respect.

WILLIAM F. BERNART, M.D.
218 Central Avenue.

The Commission Evil.

MILWAUKEE, Sept. 1, 1903.

To the Editor:—Owing to the vital question of professional ethics involved, the enclosed correspondence may be deemed worthy of reproduction in your pages.

H. V. WÜRDEMANN.

——, Aug. 19, 1903.

DR. H. V. WÜRDEMANN, Milwaukee, Wis.

Dear Doctor:—I have a male patient 58 years old coming to my office with inversion of both eyes, the disease has become very chronic (Right eye) the upper lid has five rows of displaced lashes and he has lost all power to open this lid. the left is not as bad and its seem to me there is shrinking of the conjunctiva from chronic disease, Especially trachoma The sight is fairly good of both eyes, now what in your opinion do you think it would cost him, and what per cent will you give me if I send you all the eye cases from out this way? The reason why I want to know about what it cost these farmers is so I can tell them beforehand to get the money ready, Yours Respt.

(Signed) ——

P. S. Let me hear from you soon.

MILWAUKEE, Aug. 24, 1903.

DR. ————.

My Dear Doctor:—Your letter of the 19th inst. received. On account of the two *business* questions raised in it, and as I have been approached in like manner before, I have taken some time to formulate a proper answer. I intend that this correspondence shall be published for the benefit of other young physicians who might ignorantly at some time raise the same question to their personal detriment.

From the description of your case I think that the eye condition is entropion of the lids, resulting from the cicatricial stage of chronic granular conjunctivitis (trachoma). Plastic operations on the eyelid will probably relieve the entropion.

It would not be fair to either patient or physician to give an estimate of the cost of the work without proper examination. As you well know, professional fees are regulated by several factors: Kind of services rendered, amount of time consumed and the financial standing of the patient. Thus there are no fixed fees for services; the only professional and legal requirements being that they be reasonable and such as are customary with physicians of the class to whom the consultant belongs. Customary office consultation fees in this country range from $5 to $25, depending on the standing of the consultant, as well as the above-named factors.

The above would be a sufficient answer to your letter were it not for your question: *"What per cent. will you give me if I send you all the eye cases from out this way?"* I take it for granted that you consider this question quite correct and honorable! I beg, however, to answer it curtly and completely:

The presumable reason why one physician refers a case to the care of another is that he is either unable or unwilling to give proper attention to the patient and sends him to the other's care purely for the patient's good and not as a business transaction.

The giving or acceptance of commissions by physicians (or other people) for sending patients to consultants is an unethical and dishonest act, which has not been tolerated by true physicians from the days of antiquity. It is *dishonest*, because the patient is deceived, and the collusion is more dishonorable than commission business between the doctor and druggist, which has long been frowned on by both the profession and laity. It is a *cowardly* proceeding if either of the doctors are afraid to let the patient know for what he is paying, that which he has an ethical and legal right to know. *The medical profession is not a trade*, and division of fees without the knowledge of the patient would be degrading the whole profession to the trade level.

I am not practicing medicine as a business, but as a profession, and while I am entitled to a fair fee for the knowl-

edge, time and labor expended on the case, I can not stoop to the tradesman's means of hiring drummers to get me patients. Your proposition would degrade you to a "hired man" or "barker" for the quack who might accept.

You may have, in some instances, spent time in caring for or in accompanying a patient to the consultant's office and felt delicate about submitting a bill for same—why—that is pure cowardice, the laborer is worthy of his hire!

On account of his financial condition your patient may not be able to pay the usual fee of the consultant or surgeon, yet you feel that you are entitled to some payment for such services as above stated. The matter is easily arranged; the patient has but to explain his circumstances and the consultant should be willing to reduce his fees so that the family physician may get some payment, but *all this must be done with full knowledge and consent of the patient.* I am always willing, when necessary on account of the financial condition of the patient, to reduce my bill enough, even to giving my services gratuitously to allow them to pay you, but I will not pay you a part of my fee because you are afraid to demand it of the patient.

In conclusion, I am willing to do any special work for you for what is a customary fee among specialists of my standing, for patients able to pay same; for others who can pay but little I am willing to do the work for the proportion of the usual fee they may be able to give me after paying for your services; and in cases unable to pay anything, I will cheerfully do the work without monetary recompense on your recommendation; but I will not hire any medical "barkers" to drum up trade. My strongest reasons, aside from the ethics of the case, for refusing your request is that I value the esteem of the general profession more than a business which I could not retain, if I abandoned the customs and ethics followed since the days of Galen, yea, even from those of Æsculapius. Yours very sincerely, H. V. WÜRDEMANN.

The Visiting Physician in Berlin.

BY DENSLOW LEWIS, M.D.
CHICAGO.

It has been suggested that I give a little common sense advice which may help the medical man in Berlin to utilize to the best advantage the exceptional clinical material that is there placed at the disposal of every student. I have just returned from a year's residence at that university, and at former periods of my life I have been privileged to study four years in other European cities. This experience may not entitle me to speak by the card, but at all events it authorizes me, I trust, to express views based on actual knowledge of conditions—views which are not founded on the superficial observation of a casual visitor.

To plunge *in medias res,* let me advise every one first of all to learn the language. All German medical men of culture—and they are all cultured—speak and understand English and French, and with invariable courtesy they will on many occasions seek to explain matters to the foreigner in his own language. Nevertheless, they can not be expected to do this all the time, and much of value will be lost to the American visitor unless he has at least a superficial knowledge of German medical terms. Moreover, he can not get about among the natives with any satisfaction nor appreciate the real sociologic conditions unless he can talk the language to some extent.

Before sailing get a Berlitz teacher and start talking. Get Ahn's little book, too, and Waller's "German-English Medical Dictionary." It is astonishing how much can be learned in two months by studying systematically one or two hours a day. Believe me, it is well worth the while. The Latin terms for anatomic conditions and to describe diagnosis and treatment are used more frequently than by us, and the Germans are accustomed to hear foreigners speak the language imperfectly. They catch the meaning if there is half a chance.

On arrival go first of all to a hotel—on the European plan necessarily, for there is no American plan, except in *pensions,* as the boarding houses are called. Then call at Langenbeck Haus, which is the meeting place of different medical societies and the general medical headquarters, very much like the Academy of Medicine of New York. See there the superintendent, Mr. Menzer, or his wife, who will give you the catalogue of the vacation courses, and observe the notices of matters of medical interest posted on the bulletin board. Buy a catalogue of the university lectures at any book store and also a little book entitled *"Das Medizinische Berlin."* By looking over these pamphlets you will learn much regarding the different hospitals and dispensaries—called here respectively *Klinik* and *Poliklinik*—as well as regarding laboratories, lectures and demonstrations. You see at once what is offered and you are prepared to make a choice.

Now about 1 o'clock go to the Terminus restaurant for dinner. This is the meeting place of Americans, whom you will easily recognize, for they have one or two tables reserved. Supplement the knowledge already gained by the pamphlets I have mentioned by getting practical pointers from your compatriots. If you are to stay a few weeks or longer it is cheaper and more convenient to rent a room near the hospital or other institution where you intend to spend most of your time. A suitable room with the usual breakfast of coffee and rolls supplied by the landlady can be rented for two or three marks a day. A mark is a little less than a quarter, so the expense is not great. By arranging by the week or month a cheaper rate may be secured, but beware that you give due notice of your intention to vacate—the fifteenth of the month if you are to leave the first—or you will be called on to pay for an extra month. You can get board and room in a pension at from four to five marks a day. The coffee and rolls are served in your room, as a rule, and dinner is called at 2 o'clock and supper at 8 o'clock. Most Americans find it more convenient to patronize the restaurant of which the name is legion.

It is important to conform to certain customs of the country at once or you may be considered no gentleman. Even if the great influx of Americans makes a deviation from established usage less conspicuous than was formerly the case, it is preferable to show a knowledge of social etiquette and a disposition to do as others do. Indeed, such a practice distinguishes the cosmopolitan traveler and is accepted as a mark of good breeding. You must learn the very first day how to bow. Bring the heels together as if to give a military salute and incline the whole body at an angle of 45 degrees, letting the head drop forward. Do this right and don't think nodding is sufficient. You are expected to take off your hat to those who salute you. When acknowledging the salutation of porters, tradesmen or attachés of hotels or hospitals it is enough to do as we do at home when we salute a lady. But in Berlin if you meet a lady you will not wait for her to recognize you but as soon as she is sighted you raise your hat and, holding it at almost arm's length above your head until she meets you, you make a half circle with your arm while you utter the proper salutation appropriate to the time of day. In this manner you exchange greetings with your professional colleagues and social equals. You will not shake hands when introduced except when the German, who may know of our American custom, offers to do so.

In entering a restaurant you take off your hat and hold it in your hand until you find a table that suits you. You have the pick except when you see a placard with the word *"Bestellt,"* meaning reserved, or *"Stammtisch,"* or *"Für Stammgäste,"* meaning for habitual customers. There is no head waiter as at home to order you to a certain table. If there is a crowd present and you find a vacant place at a table where others are sitting, take hold of the back of the chair, gaze at the seated guests, make the bow as above indicated and ask permission to join the little company by inquiring *"Gestatten Sie?"* The men will half rise from their seats to bow to you and will indicate their permission by the words *"Bitte schoen"* or *"Bitte sehr,"* while the ladies will incline their heads and smile pleasantly at you. When you have finished and have paid the waiter, seize the back of your chair again as in Act 1, bow to the guests and say the mystic word *"Mahlzeit."* The guests will give the countersign by repeating the word or

by saying *"Adieu"* or *"N'Abend"* as they return your salutation.

These expressions must be memorized and also the word *"Morgen,"* which is the equivalent of "good morning," and *"Tag,"* which means "good day." You use the word *"Morgen"* in salutation until about 1 o'clock, then the word *"Mahlzeit,"* which is the contraction of an invocation for a blessing on the meal, until afternoon. In bidding good-bye you say *"Adieu"* or *"Tag,"* and in the evening you say *"N'Abend."* When you enter and leave a shop you say the proper word and uncover while you are making your purchases. An exception is often made when a silk hat is worn. Much respect is apparently paid this article of headgear, which is called a *"Cylinder."* It is often kept on the head in the cafés and stores; in theaters, where it is obligatory to check umbrellas, overcoats and even ladies' wraps and hats, the silk hat is not relinquished, but held conspicuously in the hand or sometimes worn on the head if, for instance, the gentleman has the back seat in a box.

When you are invited to dinner do not fail to accept. You will have an abundance of good things to eat, drink and smoke, and you will find the hospitality most delightful. When your host begs you not to wear a *"Frack,"* as the dress suit is called, wear a Prince Albert, but when he states that evening clothes are not necessary and you know ladies are to be present, it will not be out of place and you will probably feel better if you put on your dress suit as you would do at home on such an occasion. The formal dinner hour is usually 8 o'clock. On arrival you shake hands with the host and hostess and bow low. If guests are assembled they will stand and form a circle around you while you are being introduced. Your name, with your titles, is mentioned and you make your bow. The guests are then named in turn and you bow as they do on each introduction. You then take your place in the circle to be introduced to the next arrival. When all are assembled a servant will hand you a card bearing the name of the lady whom you are to take in to dinner, and if you are a stranger the host will point her out to you. If you are the guest of honor, as was my privilege on several occasions, the hostess will take your arm as the doors to the dining room are thrown open and other couples will join in the march. Otherwise when the hostess gives the signal you salute the lady to whom your card assigns you and proceed to the dining-room with her on your arm.

It is difficult to describe a Berlin dinner party. There is a ceremonious formality and yet a freedom from stiffness and affectation which is most charming. The minute the hostess raises her glass to drink to the health of the guests, the stranger feels that he is among friends, and he at once enters heartily into the spirit of companionable conviviality that prevails. Different persons, in the course of the dinner, may drink to you. They will raise their glass and calling you by name will courteously ask permission. It is advisable for you, before dinner is over, to remember who has honored you and if possible, without any undue effort, to return the compliment. In any event, do not fail to specially drink to your hostess. A gentleman at the other end of the table may send greeting by the waiter. In that event, half rise from your seat to salute him as he drinks to you. When, in the course of two or three hours, the dinner is over, the guests all rise as the hostess gives the signal, they form in line, each lady taking the arm of her escort, and march back to the drawing-room.

Now ensues a pretty German custom which I first learned when I was a student in the little university town of Marburg thirty years ago. The guests salute the hostess and then one and another by shaking hands all around and saying *"Mahlzeit."* They bow low as they salute the ladies, and often kiss their hands. The gentlemen then light their cigars and many of the ladies smoke a cigarette. When leaving, the host and hostess are taken leave of in the drawing-room, and the servant who helps you on with your coat in the ante-room will expect a mark or two from each guest. The dinner call should be made within ten days and at 1 o'clock. The proper costume is the Prince Albert suit and silk hat. Overcoats are left in the ante-room when calling; even ladies are expected to remove their hats and wraps before being announced. The sofa, which is to be found in every drawing-room, is the seat of honor. You will sit on a chair unless it is insisted, as is usually the case, that you change to the sofa. In that event do as requested without undue parley.

(To be continued.)

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

"HEURISTIC."

BUFFALO, N. Y., Sept. 12, 1903.

To the Editor:—In the article on "Infectious Diseases," by Hektoen, in THE JOURNAL, August 15, p. 406, in the twenty-first line from the top of the left column appears the word "heuristic." Is it a misprint? If not, what is the meaning? I have examined many dictionaries and fail to find it. MEDICUS.

ANSWER.—The word is defined in the later and larger dictionaries, Webster's International, the Standard and the Century. In Webster the meaning is given as "serving to discover or find out," in the Standard as "aiding or guiding discovery, inciting to find out or invent," and in the Century Dictionary as "serving to find out or discover." Etymologically the word comes from the Greek ευρισκειν, to find out. The word has been mostly used in pedagogic literature. In Baldwin's "Dictionary of Philosophy and Psychology" the "heuristic method" is given as one "that stimulates to invention or discovery." The word has not yet come into general use, but it is an excellent one for its purpose, and as it has no single substitute will, we believe, soon come to be more familiar.

Marriages.

GEORGE H. WARDNER, M.D., La Porte, Ind., September 10.

DANIEL R. BROWER, JR., M.D., Chicago, to Miss Olive Pope Magill of Wichita, Kan., September 15.

GEORGE E. REYNOLDS, M.D., Haywards, Cal., to Miss Lydia Platt of Oakland, Cal., September 7.

WM. H. HURLEY, M.D., Northfield, Vt., to Miss Nettie V. Hoffacker, at Baltimore, September 10.

WILLIAM A. COOLING, M.D., Wilton, Iowa, to Miss Ione Parker of Texas, at Muscatine, Iowa, September 11.

H. A. HAYNES, M.D., Ionia, Mich., to Miss Inez E. Harvey of St. Albans, Vt., September 9.

Deaths.

Jesse C. Pfaff, M.D. Medico-Chirurgical College, Philadelphia, 1902, chief of the orthopedic department at the Medico-Chirurgical Hospital, died at St. Joseph's Hospital, Philadelphia, September 6, from typhoid fever, after an illness of ten days, aged 22. The Lehigh County Medical Society, at a meeting, September 8, passed resolutions regarding the death of Dr. Pfaff, and appointed a committee to attend his funeral.

John W. Waughop, M.D. Long Island College Hospital, Brooklyn, 1865, formerly superintendent of the Western Washington Hospital for the Insane, Fort Stellacoom, but for seven years a resident of Keala, Kauia, Hawaii, died at sea, August 31, while *en route* from Hawaii to San Francisco, aged 64.

Norton Folsom, M.D. Harvard University Medical School, Boston, 1864, chief medical inspector of an army corps during the Civil War, and at one time superintendent of the Massachusetts General Hospital, died at his home in Cambridge, Mass., September 12, aged 61.

H. F. Frederick, M.D. Atlanta (Ga.) Medical College, 1894, despondent on account of cancer of the stomach, from which he had suffered for several months, committed suicide by shooting himself through the head, at his home in Hawkinsville, Ga., September 10.

Peter S. Greenamyer, M.D. Jefferson Medical College, Philadelphia, 1872, a member of the American Medical Association, for many years surgeon for the Pennsylvania Lines at Orrville, Ohio, died at his home in that place, September 11, after a prolonged illness, aged 67.

Samuel Richardson, M.D. Toronto University Medical Faculty, 1875, of Detroit, Mich., died at St. Mary's Hospital in

that city, September 3, two weeks after an operation for disease of the stomach, from which he had suffered for several months, aged 58.

Alexander Bruce McMurray, M.D. Western Reserve University, Cleveland, 1871, a member of the American Medical Association and the Ohio State Medical Society, died at his home in Marion, Ohio, after a prolonged illness, September 8, aged 66.

Charles A. Murray, M.D. Geneva (N. Y.) Medical College, 1853, for half a century a practitioner of Vanetten, N. Y., died at his home in that place, September 3, from heart disease, after a short illness, aged 77.

Stephen P. Yeoman, M.D. Rush Medical College, Chicago, 1854, died at the Soldiers' Home Hospital, Marshalltown, Iowa, September 8, several weeks after a fracture of the right hip, aged 81.

Johnson A. White, M.D. Ohio Medical College, Cincinnati, died at his home in Liberty Township, Jackson County, Ohio, September 3, six weeks after an operation for appendicitis, aged 60.

Theodore R. McDonald, M.D. Detroit College of Medicine, 1890, of Detroit, died at Hayden Hospital in that city, September 14, five days after an operation for gallstone disease, aged 41.

Joseph P. Oliver, M.D. Harvard University Medical School, Boston, 1871, of Boston, lecturer on diseases of children at the Harvard Medical School, died in Paris, September 11, aged 58.

John T. Donaldson, M.D. Medical College of the State of South Carolina, Charleston, 1867, died at his home in Eastaboga, Ala., September 3, after an illness of several years.

James C. Harrison, M.D. Barnes Medical College, St. Louis, 1899, died at his home in Webber's Falls, Cherokee Nation, I. T., from malarial fever, September 6, aged 35.

George W. Stevenson, M.D. Tulane University, New Orleans, 1903, died at his father's home in Nicholson, Miss., September 8, after an illness of four months, aged 26.

Robert W. B. Cornelius, M.D. Hahnemann Medical College, Philadelphia, 1874, died suddenly from heart disease at his home in Philadelphia, August 30, aged 50.

Amos E. Heilman, M.D. College of Physicians and Surgeons, Baltimore, 1884, died at his home in Rural Valley, Pa., September 10, from typhoid fever, aged 47.

Isaac J. Newton, M.D. Tulane University, New Orleans, 1858, a retired physician of Hamburg, Ark., died at his home in that place, September 7, aged about 80.

James W. McLaughlin, M.D. University of Toronto, 1864, and gold medallist of his class, registrar for West Durham, Ont., died, August 10, aged 62.

Elias Miller, M.D. College of Physicians and Surgeons, Chicago, 1886, died at his home in Kensington, Ill., September 5, after a lingering illness, aged 65.

William Edward Conroy, M.D. College of Physicians and Surgeons, New York, 1880, died recently at Saginaw, Mich., and was buried September 2.

Frederick J. Locke, M.D. Eclectic Medical Institute, Cincinnati, 1864, died at his home in Newport, Ky., September 11, after a short illness, aged 74.

Albert Dickerson, M.D. Louisville Medical College, 1889, of New Athens, Ohio, dropped dead while making a call near that place, September 7, aged 45.

Elijah J. Puckett, M.D. Medical College of Indiana, Indianapolis, 1881, died at his home in Muncie, Ind., September 10, after a lingering illness.

William H. Poole, M.D. Medical College of Georgia, Augusta, 1868, died at his home in Douglasville, Ga., September 2, from neuralgia of the heart.

Jacob K. Metz, M.D. Jefferson Medical College, Philadelphia, 1852, died at his home in Allensville, Pa., September 11, after a long illness, aged 78.

James W. Hill, M.D. Kentucky School of Medicine, Louisville, 1861, died at his home in Bardstown, Ky., September 1, after a long illness, aged 75.

Lucius S. Ollie, M.D. University of Toronto, 1859, and gold medallist of his class, died at his home in St. Catherines, Ont., August 15, aged 73.

Sidney A. Campbell, M.D. Jefferson Medical College, Philadelphia, 1849, died at his home in West Pittston, Pa., September 12, aged 83.

J. Paul Jones, M.D. New Orleans School of Medicine, 1861, died suddenly from heart disease at his home in Camden, Ala., September 13.

Frank M. Stringfield, M.D. University of Georgetown, D.C., 1881, died suddenly in his apartments in Chicago, September 12, aged 62.

James M. Forbes, M.D. Chicago Homeopathic Medical College, 1889, was murdered in a drug store in Chicago, May 13, aged 44.

David Beeler, M.D. University of Louisville, 1883, died at his home in Powers, Ky., from neuralgia of the heart, September 7, aged 75.

Philip Woolf, M.D. Bellevue Hospital Medical College, New York, 1868, died at his home in New York City, August 31, aged 58.

Joseph M. Donald, M.D. Tulane University, New Orleans, 1854, died at his home in Harrell, Ala., September 4, aged 70.

B. R. Donelson, M.D. New Orleans School of Medicine, 1861, died at Pine Bluff, Ark., recently, from cancer of the liver.

Samuel L. Herring, M.D. College of Physicians and Surgeons, Baltimore, 1881, died recently at his home in Clovis, Cal.

Hiram Hayward, M.D., died suddenly at his home in Worth Township, Sanilac County, Mich., September 1, aged 87.

John H. Dye, M.D. Eclectic Medical College of the City of New York, 1873, of Tonawanda, N. Y., died recently.

C. E. Warren, M.D., died suddenly from heart disease at his home in Roundbottom, Ohio, September 3, aged 29.

James H. Sanford, M.D., of Shelbyville, Ind., committed suicide, September 7, while despondent, aged 65.

John Q. A. Vale, M.D., of Homer, Minn., died in Winona, Minn., September 3, after a long illness, aged 77.

Stuart McArton, M.D. Trinity Medical College, Toronto, 1876, of Paisley, Ont., died August 3, aged 51.

William E. Stewart, M.D. Louisville Medical College, 1875, died at his home in Clanton, Ala., August 31.

DeWitt H. Martyn, M.D. University of Toronto, 1866, Kincardine, Ont., died July 19, aged 66.

John F. Richards, M.D., of Tomah, Wis., died September 3, in Milwaukee, aged 87.

Book Notices.

THE PRINCIPLES OF OBSTETRICS. A Practical Manual for the Student and General Practitioner. By Stanley Perkins Warren, M.D., Portland, Me., Obstetric Surgeon to the Maine General Hospital. Superbly Illustrated by 165 Line and Half-tone Engravings. Cloth. Pp. 385. Price, $3.00 net. New York: William Wood & Co.

This book will be appreciated by students who wish a compact and convenient treatise on obstetrics. It is well illustrated.

ILLINOIS STATE BOARD OF HEALTH. Report on Medical Education and Official Register of Legally Qualified Physicians. 1903. Embracing Medical Practice in Illinois, Medical Colleges in Illinois and Faculties, Medical Societies in Illinois and Officers, Pension Examining Boards in Illinois, Requirements for Practice in the United States, Medical Colleges in the United States, and an Official Register of Physicians. Springfield: Illinois State Register. 1903.

The Illinois State Board of Health republishes this year its Report on Medical Education and Official Registration of Legally Qualified Physicians. It includes a number of valuable facts in regard to medical colleges and societies in Illinois and brief statements of the requirements for practice in the various states and territories brought up to the spring of the present year. There have been some changes since then, as noted in THE JOURNAL, but in most cases the laws are unchanged. The opinions obtained from the attorney-general in regard to the medical practice laws and other subjects are a valuable feature of the report.

A COURSE OF LECTURES ON MEDICINE TO NURSES. By Herbert E. Cuff, M.D., F.R.C.S., Medical Superintendent Northeastern Fever Hospital, Tottenham, London. Fourth Edition. Cloth. Pp. 270. Price, $1.25 net. Philadelphia: P. Blakiston's Son & Co. 1903.

Nurses stand in a peculiar relation between the laity and the profession, and the question sometimes arises how far a little knowledge is a dangerous thing. Some nurses, as the one quoted in a recent communication to the *British Medical Journal*, evidently have suffered from a certain amount of

knowledge of disease, not enough in amount, however, to be useful to them. This book may be said to be a small compendium of practice, exceedingly brief and hardly sufficient to guide even a nurse in actual practice, though one that will perhaps meet the natural desire of anyone who is anxious to know something about the various diseases. We notice some little inaccuracies, for example the definition of germs as being invariably of vegetable nature, all belonging to the order of fungi. The book is one that will do no harm in the hands of any intelligent, well-meaning nurse.

Miscellany.

Clippings From Lay Exchanges.

WOUND LOCALIZATION.

"Sheriff Reed has captured Eugene Ledford, the young man who shot Felmet in the West End, two months ago. . . . ."—*Asheville* (N. C.) *Daily Citizen*, Aug. 21, 1903.

WHAT TOADSTOOLS CONTAIN.

"Three families were poisoned last evening by eating toadstools. . . . . Dr. —— says the symptoms indicate that the toadstools contained ptomaine poisoning."—*Chicago Examiner*, Aug. 24, 1903.

WHERE DID HE GET IT?

"Dr. —— has completed his investigations into the death of ——, aged three weeks, and found that death was due to an artificial foot."—*New Haven* (Conn.) *Palladium*, Aug. 15, 1903.

PILES OR PYELITIS?

"Joseph Fuma, the five-months-old son of ——, is at the hospital at . . . . The infant was suffering from an intestinal obstruction called 'pyelitis.' . . . . The obstruction was removed . . . ."—*Richmond* (Va.) *Leader*, Aug. 12, 1903.

SOOTHED BY COMMUNION AND CHLORAL.

"Life . . . . Prolonged by Means of Stimulants and Concentrated Nourishment— . . . .—Soothed Last Evening by Religious Service of Last Communion and a Dose of Chloral— . . . ."—*Johnstown* (Pa.) *Democrat*, July 6, 1903.

NO ANTISEPTIC WAS GIVEN.

"Yesterday . . . . Herbert —— was kicked and painfully hurt by a mule colt. . . . . A physician was summoned . . . . and dressed the wound. . . . . The boy stood the operation very well, considering the fact that no antiseptic was given."—*Durham* (N. C.) *Morning Herald*, Aug. 16, 1903.

IRRITANT ANTIDOTE.

"Joseph B. —— had a most exciting experience . . . . with a copperhead (which bit his finger). On the afflicted hand were several large black spots showing that the poison deposited in the blood was virulent. However, he went home feeling pretty good after the physician had administered a poison irritant."—*Daily Democrat*, Johnstown, Pa., July 7, 1903.

HIS EYE WAS HIS ONLY TOUGH SPOT.

"William —— lost his left eye by the explosion of a dynamite bomb . . . . it is thought the fragment that destroyed his eye would have caused death had it hit him anywhere else."—*De Ruyter* (N. Y.) *Gleaner*, July 9, 1903.—"The opinion of the physicians is that if the fragments of the bomb had struck him in any other place than they did he would probably have been instantly killed."—*Syracuse* (N. Y.) *Herald*, July 6, 1903.

Dentistry in Medical Colleges.—The National Dental Association at the recent meeting held at Asheville, N. C., adopted the following resolution: "*Resolved*, That it is the sense of the National Dental Association that each Medical College in the United States should include in its curriculum a lectureship on oral hygiene, prophylaxis and dental pathology." The committee representing the National Dental Association feels that with the introduction of the teaching of oral hygiene in the public schools, and with the co-operation of medical men who have been specially instructed on this subject, a great stride will have been made toward the prevention of caries of the teeth, not to mention many other good results to the general system, which would surely follow a better care of the oral cavity.

State Boards of Registration.

Next New Jersey Examination.—The regular examination of the State Board of Medical Examiners of New Jersey will be held at Trenton, N. J., on Tuesday, Tuesday evening and Wednesday, October 20-21. Application for admission to this examination should be made before October 10. Applicants must possess a high school diploma issued after four years of study, or its equivalent as determined by the state superintendent of public instruction, and must have had four courses of medical lectures of seven months each in different years.

Oklahoma Report.—Dr. E. E. Cowdrick, Enid, secretary of the Oklahoma Territorial Medical Examining Board, reports that a written examination of 18 applicants was held at Enid, September 17, and 9 passed and 9 failed. The questions asked numbered 72 on 9 subjects and no average was definitely marked against each candidate, the requirement being simply that his answers be 66 2/3 per cent. correct on each subject. Those who passed were graduates from the following colleges, one from each unless otherwise specified: Creighton Med. Coll. (1902); Univ. Med. Coll., Kansas City (1900); Marion-Sims Med. Coll., St. Louis (1903); Maryland Med. Coll. (1903); Western Univ., London, Ont. (1900); Washington Univ., St. Louis (1897); Memphis Hosp. Med. Coll. (1903); and two from Louisville Med. Coll. (both 1903). Those who failed were from: Univ. of Texas, Galveston (1902); Missouri Med. Coll., St. Louis (1894); Kentucky School of Med. (1887); Maryland Med. Coll. (1903); two from Barnes Med. Coll. (1897 and 1892); two from Keokuk Med. Coll. (1881 and 1901), and another was not a graduate, but had had twelve years of practice.

Texas Report.—Dr. M. M. Smith, secretary of the Board of Medical Examiners for the state of Texas, reports that at the examination held at Austin, June 15 to 18, 1903, 24 candidates were examined, of whom 16 passed and 8 failed. Of those who passed, 8 were graduates; of those who failed, 2. Applicants are not required to be graduates of medical schools, but must have attended at least two sessions at a medical college. In the summary below a star indicates an undergraduate. A percentage of 75 is required on a written examination. The number of subjects in this examination was 13, questions, 125.

Candi. date.	Schl. of Pract.	College.	Year Grad.	Per Cent.
		PASSED.		
1	R.	Ft. Worth Univ. and Univ. of Nashville.	*	78
12	R.	Fort Worth University	*	79
2	R.	Kansas Medical College	1903	75
3	R.	Kansas Medical College	1897	82
4	R.	Tulane University	*	86
14	R.	Tulane University	*	78
5	R.	Maryland Medical College	1903	85
16	R.	Maryland Medical College	*	78
6	R.	Ohio Medical University	1903	82
7	R.	Arkansas University	1903	75
8	R.	University of Iowa	*	83
11	R.	University of Texas	*	88
13	R.	University of Tennessee	1903	84
9	R.	Memphis Hospital Medical College	*	77
15	R.	Memphis Hospital Medical College	1903	88
10	R.	Missouri State University	1901	86
		FAILED.		
17	R.	Memphis Hospital Medical College	1894	71
22	R.	Memphis Hospital Medical College	*	72
18	R.	Kentucky School of Medicine	*	57
19	R.	Fort Worth University	*	62
20	R.	University Medical College, Kansas City	*	35
21	R.	Hospital College of Medicine, Louisville.	*	62
23	P.	College of Medicine and Surgery (Physio-Medical), Chicago	1899	62
24	E.	Bennett Medical College	1894	53

* Undergraduate.

The questions asked follow:

SURGERY.

1. Give the indications for the ligation of the common carotid artery, and describe the operative procedure. 2. Differentiate a stone in the bladder, in the ureter, and in the kidney. 3. Give the differential diagnosis between dislocation of the hip joint and fracture of the surgical neck of the femur. 4. Name the chief varieties of cancer. 5. In case of threatened death from general anesthesia what methods of resuscitation would you adopt? 6. Describe the

method of passing a hard (steel) catheter on the male. 7. What are the symptoms of dislocation of the lower jaw; and how would you effect its reduction? 8. Describe the symptoms and treatment of fracture of the ribs. 9. Describe the varieties of clubfoot. 10. How would you differentiate between embolus and hemorrhage (intercranial) of one of the branches of the middle meningeal artery? Give treatment and prognosis.

EYE, EAR, NOSE AND THROAT.

1. Give the symptoms of mastoid involvement of otitis media. 2. Give the most frequent causes of otitis media, chronic and acute. 3. Give the symptoms and treatment of adenoids in the pharynx. 4. What is glaucoma? Give its causes, symptoms and treatment of both chronic and acute. 5. How would you recognize and treat polypi?

CHEMISTRY.

1. Into what grand divisions is the subject of chemistry divided? 2. Explain and illustrate the principle of empirical and rational formulæ. 3. What is meant by percentage composition? 4. Explain and illustrate the term isomerism. 5. What is bismuth, and what are the properties of bismuth? 6. On what does Reinsch's test for arsenic depend? 7. Describe the element mercury and name its compounds used in medicine. 8. What are the differences in the tests of arsenic and antimony? 9. What is ozone? 10. Describe carbon dioxid, and name some of the ways by which it may be produced.

PRACTICE OF MEDICINE.

1. Diagnosis and treatment: Of angina pectoris. 2. Of cerebral apoplexy. 3. Of appendicitis. 4. Of asthma. 5. Differential diagnosis of suppurative pleuritis and abscess of liver. 6. Causes and treatment: Of Cholera infantum. 7. Of infantile convulsions. 8. Differential diagnosis of spasmodic croup and diphtheria. 9. Diagnosis and treatment: Of delirium tremens. 10. Of lymphadenoma (or Hodgkin's disease).

OBSTETRICS.

1. Asepsis and antisepsis, how applied in midwifery: (a) As regards the accoucher. (b) As regards the parturient. (c) As regards the child. 2. How should the placenta be delivered at term? What is the management of retained placenta? 3. To what form of morbus Brightii are pregnant women most liable? How would you diagnose and treat it? And how measure the severity? 4. What is placenta previa? Name its causes, varieties, symptoms and management. 5. Describe the symptoms and management of an incomplete abortion. 6. Describe the position of patient and physician for the readiest and safest means of applying the forceps. 7. Diagnose and state how to conduct a head-last labor. 8. Give cause, symptoms and treatment of asphyxia of the new born. 9. Give the prevention, symptoms, treatment and prognosis of ophthalmia neonatorum. 10. What is meant by prolapse of the funis? When does it occur? What are the dangers? How would you manage such a case?

MATERIA MEDICA.

1. What are the physiologic actions: Of iodin? 2. Of salicylic acid? 3. What are the preparations, doses and physiologic actions of ergot? 4. What are the tests for morphin, and give antidote. 5. How would you treat a case of veratrum poisoning and what are the uses of veratrum viride. 6. Give the physiologic action: Of jaborandi. 7. Of opium and antidote. 8. Of cocain. 9. How would you treat a case of copper poisoning? 10. How would you treat a case of poisoning by iodin.

PATHOLOGY.

1. Describe the minute pathology of a liver which has undergone fatty degeneration. 2. How does chronic interstitial differ from chronic parenchymatous nephritis; describe the pathology of each. 3. Describe the pathological condition known as erosion of the cervix. 4. Give pathology of the various stages of acute lobar pneumonia. 5. Give a theory of inflammation, and what are the sequelæ of inflammation? 6. (a) What constitutes malignancy of tumors? (b) Name and give principal locations of malignant tumors. (c) Give causes of tumor cachexia. 7. Give the various theories of causation of fever. 8. Give the pathology of the different inflammations of the spleen. 9. Describe the pathology of a third degree burn of the skin produced by hot metal. 10. What are the forms of pathologic pigmentation?

ANATOMY.

1. Name the bones of the face. 2. Name the ligaments and give the peculiarities of the shoulder joint. 3. What muscles are attached to the crest of the pubes? 4. Give the landmarks for the palmar arches. 5. What veins form the portal system? 6. The axillary glands receive the lymphatic vessels from what part of the body? 7. Give the course and landmark of the duct of the parotid gland. 8. Give the relations of the thyroid gland. 9. Give boundaries and contents of the popliteal space. 10. What nerves supply the diaphragm?

HISTOLOGY.

1. Trace a drop of fluid from a Bowman's capsule to the pelvis of the kidney, naming and giving the structure of the different parts of the uriniferous tubules through which it would pass. 2. (a) Give the shape, size and structure of a human red blood cell. (b) The structure and relative number of the various forms of the white blood cells. (c) Could you tell whether the red blood cells of a given clot were mammillian or not? If mammillian, human or not? Give reasons for your answer. 3. Give the course of the portal blood through the liver, also the course of the bile from the time of its secretion by the liver cells until it reaches the gall bladder, giving the structure of the ducts through which it would have to pass. 4. Describe the structure of the trachea, a medium-sized bronchus, an alveolar duct and an alveolus of the lung. 5. Give a description of lymphatic vessels, lymph cavities and lymph glands, and give examples of each and where each may be found. 6. (a) Describe the structure of involuntary muscle and give three examples of where found. (b) Give structure of heart muscle and the ending of the nerve fibers supplying same. 7. Describe a nucleus, a nucleolus and protoplasm. 8. (a) Give histology of a medium sized artery. (b) Give histology of a vein. 9. Explain the difference between mucous and serous membranes. 10. (a) Describe a nerve trunk. (b) Describe a non-medullated nerve fiber. (c) Describe a medullated nerve fiber. (d) The two types of nerve cells in the brain and cord. (e) The structure of ganglia.

PHYSIOLOGY.

1. What is urea, give the daily quantity excreted, and mention the influences which govern this quantity? 2. Give the quantity of food required per day by a healthy person. 3. The secretions of what glands form the saliva? 4. Give the physiologic action of the saliva. 5. Give the physiologic action of bile. 6. How is the digested food absorbed and through what channels does it reach the circulation? 7. What are the functions of the red blood corpuscles? 8. Give the composition of atmospheric air; what changes occur in it during respiration? 9. How is animal heat produced? 10. What forces cause the blood to flow through the veins?

GYNECOLOGY.

1. Describe a curettement. What are the dangers? 2. Give the indications for and the technic of ventrofixation. 3. Differentiate between retroflexion and retroversion of the uterus. 4. Vaginal douche. What are the indications for and how given? 5. When is an Alexander operation indicated? Give technic of operation. 6. How is a vaginal hysterectomy done? 7. Given a complete laceration of the perineum, how should it be repaired? Name the two most important muscles to be restored. 8. How would you prepare "normal salt solution?" How and when use it by infusion? How and when use it by hypodermoclysis? How and when use it by enteroclysis? 9. How would you prepare a patient for a laparotomy? 10. What is the proper way of making a gynecologic examination?

MEDICAL JURISPRUDENCE.

1. Define a poison. 2. Give definitions of an irritant, and one of neurotic poison, and give example of each. 3. Define ordinary and expert witness. 4. What is infanticide? 5. What is paranoia? 6. Define civil malpractice. 7. Define criminal malpractice. 8. What is meant by civil and criminal responsibility? 9. Define the following terms, viz.: (a) Kleptomania. (b) Pyromania. (c) Dipsomania. 10. What are the evidences of death from lightning?

THERAPEUTICS.

1. Give the dose, indications for use, frequency of administration and method of giving diphtheria antitoxin. 2. Enumerate the commonly used bromids, their doses and mention briefly their therapeutic use. 3. Give in detail the use of chloroform as an anesthetic, the preparation of the patient, method of administration, the danger signals and manner of treating same when present. 4. Give the dose and therapeutic use of creosote and its common derivatives. 5. Give the various therapeutic uses of calomel, and the dose employed in each. 6. Give in detail the dose, use and contraindications of iodid of potassium. 7. Describe in detail the general treatment applicable to poisoning from any drug. 8. Give the dose and therapeutic use of veratrum viride. 9. Give the dose and indications for use of quinin and arsenic in the treatment of malaria. 10. Give briefly the treatment of strychnin and opium poisoning.

HYGIENE.

1. What hygienic and sanitary measures should the attending physician take to prevent the spread of typhoid fever? 2. Construct a model school room for the accommodation of 40 pupils. 3. What are some of the evidences of contaminated drinking water, and give the method of purifying the same. 4. Give the origin and prevention of malaria. 5. Give a good method of sewage disposal (municipal). 6. Name the dangerous impurities of the air in crowded, unventilated rooms. 7. What do you understand by preventive medicine? 8. Do you know of any preventive of tuberculosis? 9. Name the communicable diseases of school children. 10. Give the hygiene of the new-born babe.

Medical Organization.

Organization in Texas.

Dr. T. J. Bennett, councilor for the Seventh District, reports that he has organized the following county societies: Williamson, Travis, Caldwell and Lee. Dr. W. B. Russ, councilor for the Fifth District, reports having organized societies in the following counties: Bexar, Guadalupe, Medina, Val Verde, Comal and Maverick.

BROWN COUNTY (TEXAS) MEDICAL SOCIETY.

Physicians of Brown County met at Brownwood the last week in August and organized a county medical society with ten charter members.

MEDINA COUNTY (TEXAS) MEDICAL SOCIETY.

Dr. Witten B. Russ, San Antonio, councilor for the Fifth (western) District, has organized this society with seven members and the following officers: Dr. J. R. Evans, Devine, president; Dr. John F. Beckmeyer, Hondo, vice-president; Dr. John T. Fitzsimon, Castroville, secretary-treasurer, and Drs. J. R. Evans, W. E. Patterson, Medina, and John F. Beckmeyer, censors.

VAL VERDE COUNTY (TEXAS) MEDICAL SOCIETY.

Dr. Witten B. Russ, San Antonio, councilor for the Fifth (western) District, has organized this society with six members and the following officers: Dr. John K. Moeur, Del Rio, president; Dr. Horace B. Ross, Del Rio, vice-president; Dr. S. L. Boren, secretary-treasurer, and Drs. Horace B. Ross, D. T. Atkinson and Oscar C. West, censors.

MAVERICK COUNTY (TEXAS) MEDICAL SOCIETY.

Dr. Witten B. Russ, San Antonio, councilor for the Fifth (western) District, has organized this society with six members and the following officers: Dr. R. N. Lane, Eagle Pass, president; Dr. A. H. Evans, vice-president; Dr. Malone Duggan, Eagle Pass, secretary-treasurer, and Drs. Evans, L. Hume and Duggan, all of Eagle Pass, censors.

GUADALUPE COUNTY (TEXAS) MEDICAL SOCIETY.

Dr. Witten B. Russ, San Antonio, councilor for the Fifth (western) District, has organized this society with an initial membership of 11, and the following officers: President, Dr. Marvin B. Grace, Seguin; vice-president, Dr. F. R. Williams, Kingsbury; secretary-treasurer, Dr. D. A. Watson, and censors, Drs. F. R. Williams, Kingsbury, William Myers, Seguin, and Asa M. Stamps, Seguin.

COMAL COUNTY (TEXAS) MEDICAL SOCIETY.

Dr. Witten B. Russ, San Antonio, councilor for the Fifth (western) District, announces the organization of this society with four members and the following officers: Dr. Henry Leonard, New Braunfels, president; Dr. L. V. Weathers, vice-president; Dr. Alfred H. Noster, New Braunfels, secretary-treasurer, and Drs. Alonzo Garwood, Alfred H. Noster and Henry Leonard, all of New Braunfels, censors.

NUECES COUNTY (TEXAS) MEDICAL ASSOCIATION.

Dr. Arthur E. Spohn, Corpus Christi, councilor for the Sixth (Corpus Christi) District, on September 5, organized this association with the following officers: Dr. Arthur E. Spohn, Corpus Christi, president; Dr. Alfred G. Heaney, Corpus Christi, vice-president; Dr. Henry Redmond, Corpus Christi, secretary; Dr. J. D. Hooker, Alice, treasurer, and Drs. Henry S. Burke, Corpus Christi, W. T. Harris, Mathis, and Walter F. McMullen, Rockport, censors.

BURLESON COUNTY (TEXAS) MEDICAL ASSOCIATION.

Dr. Sam R. Burroughs, Buffalo, councilor for the Eleventh (Brazos Valley) District, met the physicians of the county at Caldwell, September 3, and organized a county society with a charter membership of seven, and the following officers: Dr. James P. Oliver, president; Dr. Joseph W. Matthews, vice-president; Dr. B. O. McLean, secretary and treasurer, all of Caldwell, and Drs. Joseph W. Matthews, Caldwell, Robert E. B. Bledsoe, Somerville, and Duncan M. Broach, Merle, censors.

GRIMES COUNTY (TEXAS) MEDICAL ASSOCIATION.

The physicians of the county met at Anderson, September 5, and were addressed by Dr. Sam R. Burroughs, Buffalo, councilor for the Eleventh (Brazos Valley) District, on the benefits of county organization. A county medical association was then formed with an initial membership of 15, and the following officers: Dr. Fred B. Johnstone, Anderson, president; Dr. William Hayne, Anderson, vice-president; Dr. B. H. Bennett, secretary, and Drs. H. J. Palmer, Yarboro, A. J. Burke and A. J. Whitworth, censors.

Columbia County (Wis.) Medical Society.

This society was organized at Portage, September 9, with 14 members. Dr. James J. Howard, Columbus, was elected president; Dr. John R. Binnie, Poynette, vice-president, and Dr. Frederick D. Bentley, Portage, secretary and treasurer.

Fond du Lac County (Wis.) Medical Society.

Dr. Eugene L. Boothby, Hammond, councilor of the Eleventh District, met the physicians of the county, September 9, and organized a county medical society, of which Dr. Henry Hannum, Bayfield, was elected president, and Dr. H. G. Lampson, Washburn, vice-president.

Tippecanoe County (Ind.) Medical Society.

This society met at Lafayette, September 15, and with the aid of Dr. George F. Keiper, councilor for the Tenth District, reorganized and adopted a constitution and by-laws in conformity with those of the Indiana State Medical Society and the American Medical Association.

Muskingum County (Ohio) Medical Society.

At the annual meeting, September 8, the society adopted the constitution and by-laws recommended by the state and National organizations, and elected Dr. C. U. Hanna, president; Dr. Abdul M. Templeton, vice-president; Dr. William F. Sealover, secretary, and Dr. Charles P. Sellers, treasurer, all of Zanesville.

Forsyth County (N. C.) Medical Society.

This society was reorganized at a meeting held in Winston-Salem, September 8, with the following officers: Dr. H. S. Lott, Winston-Salem, president; Dr. Edward F. Strickland, Bethania, vice-president; Dr. Robert D. Jewett, Winston-Salem, secretary, and Drs. A. Y. Linville, Waughtown; Henry T. Bahnson, Winston-Salem, and David N. Dalton, Winston-Salem, censors.

Jefferson County (Ind.) Medical Society.

This society met in Madison, September 7, and by unanimous vote decided to reorganize in accordance with the recommendations of the American Medical Association. The following officers were re-elected: Dr. William A. McCoy, Madison, president; Dr. Nicholas A. Kremer, secretary-treasurer, and Drs. Charles R. Ryker, Manville, Jefferson Cooperider Madison, and Fred H. Austin, North Madison, censors.

Dade County (Fla.) Medical Society.

On September 3 thirteen physicians of Dade County met at Miami, organized a county medical society, adopted a constitution and by-laws conforming to those of the state society and the American Medical Association, and elected the following officers: Dr. R. H. Huddleston, Miami, president; Dr. N. O. Burnham, West Palm Beach, vice-president, and Dr. E. W. Pugh, Miami, secretary and treasurer.

Ringgold County (Iowa) Medical Society.

The members of this society met at Mount Ayr, August 13, and reorganized under the rules laid down by the state and National organizations. Dr. Benjamin B. Waring, Maloy, is president; Dr. John W. Greenman, Kellerton, vice-president; Dr. Samuel Bailey, Mount Ayr, secretary-treasurer, and Drs. William Horne, Mount Ayr, Cassius T. Lesan, Mount Ayr, and B. H. Miller, Redding, compose the board of censors.

Pearl River-Marion County (Miss.) Medical Society.

This society was recently organized by Dr. Hyman McM. Folkes, Biloxi, councilor for the Tenth District, at Lumberton, with the following officers: Dr. William J. Hunnicutt, Poplarville, president; Dr. Theodore B. Ford, Columbia, vice-president for Marion County; Dr. W. W. Hall, vice-president for Pearl River County; Dr. Charles C. Bass, Columbia, secretary; Dr. Robert W. Thompson, Lumberton, treasurer, and Drs. Stephen B. Harmon, Lumberton, Buford Larkin, Columbia, and L. L. Polk, Purvis, censors.

Benton County (Iowa) Medical Society.

Seventy-five per cent. of the physicians of Benton County met at Vinton, September 8, and organized a county medical society in affiliation with the state and National organizations. The following officers were elected: Dr. Marion Meredith, Vinton, president; Dr. Samuel H. Watson, Blairstown, vice-president; Dr. John E. Luckey, Vinton, secretary; Dr. Clark C. Griffin, Jr., Vinton, treasurer; Drs. Clark C. Griffin and Jay P. Whitney, Vinton, and Irvin S. Boles, Shellsburg, censors, and Dr. James McMorris, Belle Plaine, delegate to the state society.

Societies.

COMING MEETINGS.

American Academy of Railway Surgeons, Chicago, Oct. 1-2.
Colorado State Medical Society, Denver, Oct. 6-8.
Medical Association of the District of Columbia, Washington, Oct. 6.
Idaho State Medical Society, Boise, Oct. 8-9.
Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7-9.
Vermont State Medical Society, Bellows Falls, Oct. 15-16.
New York State Medical Association, New York City, Oct. 19-22.

Hawaiian Territorial Medical Society, Honolulu, Nov. 7.
Oklahoma Territory Medical Association, Oklahoma City, Nov. 11.

Iowa State **Association of Railway Surgeons.**—The tenth annual meeting will be held at Des Moines, October 14 and 15.

American **Academy of Railway Surgeons.**—The tenth annual meeting will be held in the Great Northern Hotel, Chicago, October 1 and 2, under the presidency of Dr. Luther Sexton, New Orleans.

Canadian **Medical Association.**—Dr. Simon J. Tunstall, Vancouver, B. C., was elected president; Dr. George Elliott, Toronto, Ont., re-elected secretary and Dr. Henry B. Small, Ottawa, Ont., re-elected treasurer. The next meeting will be held in Vancouver.

Medical and Chirurgical Faculty of Maryland.—The semi-annual meeting will be held September 24 and 25 at Pen Mar on the Western Maryland Railway in the Blue Ridge Mountains. Matters of legislation will be discussed, including changes needed in the medical examination and licensing laws. The constitution and by laws will be so modified as to place the society in full accord with the American Medical Association and the county societies.

Medical **Society of the Missouri Valley.**—At the sixteenth annual meeting held in Omaha, September 14, the following officers were elected: President, Dr. A. D. Wilkinson, Lincoln, Neb.; vice-presidents, Drs. Robert R. Williams, Manning, Iowa, and J. Harvey Cleaver, Council Bluffs, Iowa; secretary, Dr. Charles Wood Fassett, St. Joseph, Mo., and treasurer, Dr. Donald Macrae, Council Bluffs, Iowa. The next meeting of the society will be held at Lincoln, Neb. An amendment to the constitution was adopted, making Council Bluffs the annual meeting place, the sessions to convene on the fourth Thursday of August of each year. The semi-annual meetings will be held as heretofore at places in the Missouri Valley.

Cumberland **Valley Medical Society.**—This society was organized at Mont Alto Park, September 8, with the following officers: President, Dr. Robert W. Ramsey, Chambersburg, Pa.; vice-presidents, Drs. James Evelyn Pilcher, U. S. Army, retired, Carlisle, T. H. Weagley, Marion, Pa., and James W. Humrichouse, Hagerstown, Md.; secretary, Dr. John J. Coffman, Scotland, Pa.; assistant secretary, Dr. P. Brough Montgomery, Chambersburg, Pa., and Americus R. Allen, Carlisle, Pa., and treasurer, Dr. John Montgomery, Chambersburg, Pa. Forty physicians from Cumberland Valley towns were present. Dr. Joseph T. Rothrock of the Pennsylvania Forestry Department, who is in charge of the Mont Alto Reservation and White Pine Consumption Sanitarium Camp, made an address on the open-air treatment of tuberculosis. Major James Evelyn Pilcher, U. S. A., offered a motion, which was adopted, that the state of Pennsylvania be urged to appropriate sufficient money for the full development of the sanitarium, which is now so crowded that scores of patients are turned away weekly.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Benzoin Preparations.

The preparations of benzoin have been employed, both locally and internally, with excellent results in the treatment of various conditions. H. R. Coston, in *Ther. Gaz.*, states that they are of service as antiseptics, antipyretics, analgesics, diaphoretics and diuretics. The tincture, compound tincture, benzoic acid, benzoate of lithium, ammonium, sodium, bismuth and potassium benzoate are the preparations most frequently employed. Internally the lithium benzoate has been used most often by the author. A 1 to 1,000 solution of benzoic acid prevents the development of bacteria and a solution of 4 to 1,000 kills them. Locally he uses the compound tincture in sealing healthy fresh cut wounds in preference to any other dressing. Either the tincture or the acid or the bismuth salt yield excellent results in the treatment of cracked nipples, granulating surfaces, bed sores, chapped hands, anal fissures, and is of special benefit in the treatment of frost bites after they reach the secondary period.

Chronic forms of eczema are benefited by painting the parts with the tincture or dusting them with the bismuth benzoate. He recommends the following combination in the treatment of chancres and chancroids:

℞.	Bismuthi benzoatis	℥iv	15
	Aristol	℥i	4

M. Sig.: Apply locally as a dusting powder.

The following combination serves as an excellent dressing in scrofulous skin lesions:

℞.	Zinci oxidi		
	Acidi benzoici, āā	℥ii	8

M. Sig.: To be used locally as a dressing.

Where it is desirable to remove superficial layers of the skin in cases of freckles, or what is classified by the author as "liver spots," the following is recommended:

℞.	Tinct. benzoini co.	℥iss	45
	Hydrarg. chloridi corros.	℥i	4
	Aq. cologne, q. s.	℥viii	240

M. Sig.: Apply twice daily.

In suppurating and foul-smelling ulcers nothing serves better as a dressing than benzoic acid or its bismuth salt, first cleansing the sore and drying it and applying the powder, over which cotton and bandage should be placed. Internally the chief indication is the treatment of cystitis accompanied by ammoniacal urine. The author gives it in 15 to 20 grain (1-1.30) doses every two to four hours until the urine becomes acid, after that it may be given three times a day well diluted. It is of value in enuresis of children with neutral or alkaline urine, giving three to five grains after meals three times a day.

In the acute diarrheas of children it is of value given in two-grain (.12) doses every three or four hours to a child of one year or over. It may be given to advantage in chronic bronchitis and in the different forms of influenza. [Mention should also have been made of the value of benzoin in the acute inflammations of the larynx and trachea. It is best administered in the form of an inhalation by floating one or two drams of the tincture on boiling water and instructing the patient to inhale the vapor. By this method the paroxysms can be stopped almost instantaneously, and the patient will drop off to sleep until the next paroxysm, which will gradually become less frequent and less severe.] Trochees containing benzoic acid are also efficient in some cases:

℞.	Acidi benzoici	gr. ss	03
	Sodii biboratis	gr. iss	09
	Pulv. acaciæ q. s.		

M. Ft. trochiscum No. i. Sig.: One every hour dissolved in the mouth.

Rectal Dilatation for Chronic Constipation and Hemorrhoids.

A correspondent writes: "Can you furnish through THE JOURNAL something authentic about the treatment of constipation and hemorrhoids by the use of rectal (sphincter dilatation)? Various advertisers laud instruments for the purpose. I should like to hear something about the method from a qualified physician."

Constipation is not a condition due to a single cause, consequently no single line of treatment, such as dilatation of the sphincter ani, will cure all cases. A certain percentage of cases are due to overaction or spasmodic action of the sphincter, the spasmodic action being due to a hypersensitive condition of the mucous membrane, caused by slight fissures, superficial ulcers, inflamed follicles or crypts, mild hemorrhoidal condition of the veins, etc. Many of these cases will be relieved of the constipation by dilatation of the sphincter, because the dilatation cures the fissures or inflammatory and irritable condition of the anus, and the spasmodic action of the sphincter ceases. Thorough dilatation under anesthesia is preferable to the use of the so-called rectal dilators flooding the market. A selection of cases must be made based on the conditions present, otherwise frequent disappointment will follow the use of the dilatation treatment of chronic constipation.

Seborrhea of Scalp.

The following combinations, according to an abstract in *N. Y. and Phil. Med. Jour.*, are recommended in the treatment of baldness: After correcting any disturbances of the gastro-intestinal tract and giving the proper attention to arthritic diatheses the following should be used locally to remove the oily secretion:

℞. Sodii boratis 3iii 12
Spts. etheris .....ʒss 15
Aquæ .....ʒviii 240
M. Sig.: Shake and apply locally. The following for the glandular secretion:

℞. Potass. sulphid. .....gr. xv 1
Tinct. benzoini 3ss 2
Aq. destil. .....ʒiii 90
M. Sig.: Locally as a lotion to the scalp.

And to assist in stimulating the growth of the hair, the following:

℞. Lac. sulphuris .....gr. iii 20
Olei ricini .....m. vi 40
Acidi acetici (glacial).....gtt. xv 1
Resorcin 3ss 2
Chloralis hydratis 3i 4
Tinct. jaborandi 3i 4
Tinct. cantharidis 3ii 8
Alcoholis .....ʒvi 180
M. Sig.: To be applied locally.

In the loss of hair following an attack of typhoid fever or pregnancy, the following is recommended:

℞. Spts. chloroformi
Tinct. benzoini
Olei ricini, āā.....3i 4
Olei pini .....m. vi 40
Alcoholis .....ʒvi 180
M. Sig.: Locally to the scalp.

Chronic Diarrhea.

Chronic diarrhea, according to an abstract in *Amer. Med.*, depends on: 1. Autointoxication; 2, an intestinal lesion; 3, insufficiency of gastric digestion. In any case the cause must be treated. In diarrhea due to uremia the patient should be confined to a milk diet. In those cases due to exophthalmic goiter, faradization of the goiter will check the diarrhea. In chronic dysentery a combination of calomel, ipecac and opium is of great value, prescribed as follows:

℞. Pulv. ipecacuanhæ .....gr. i 06
Hydrarg. chloridi mitis.....gr. 1/3 02
Ext. opii .....gr. 1/15 004
M. Ft. pilula No. i. Sig.: Five to eight pills daily.

The author recommends that one or two teaspoonfuls of Rochelle salts be taken two or three times a week in hot water, before meals. In some cases the following powder may be given twice a day before meals:

℞. Pulv. simarubæ .....gr. v 30
Pulv. catechu
Ext. krameriæ, āā.....gr. iv 25
Bis. subnit. .....gr. x 65
M. Ft. chart. No. i. Sig.: One powder twice a day before meals.

If severe colic is present a small quantity of paregoric may be given. Adrenalin is also recommended in doses of five or ten drops of a 1 to 1,0000 solution taken in a little water on arising and before retiring. In diarrhea due to gastric disturbances the proper dietetic measures must be observed. When the mouth is foul in these different forms of diarrhea, Rochelle salts should be taken on an empty stomach, unless there is marked gastric disturbance. A teaspoonful of sodium sulphate in a glass of hot water, to which has been added ten drops of dilute hydrochloric acid, will aid in correcting the condition. It should be taken after meals.

In the treatment of dysentery Roger and Rocaz recommend the use of rectal injections of neutralized hydrogen dioxid in water. The commercial hydrogen dioxid being acid in reaction must be neutralized before using. It may be mixed with an equal quantity of a 4 to 1,000 sodium bicarbonate solution. Another method of neutralizing is by mixing the hydrogen dioxid with Vichy water. The quantity to be injected should be varied to suit the case under treatment. The amount may range from one pint to a quart in adults, and three to six ounces for infants. Two or three injections a day, in benign cases, will be sufficient, which may be increased in severer cases. It is said by this treatment that the pains and tenesmus rapidly diminish and the mucus and blood disappear from the stools. This may be used in any form of enteritis.

In the treatment of chronic dysentery Bjorkman, in *Merck's Archives*, recommends enteroclysmata of silver nitrate, grains 30 (2.00) to the pint (480.00) of water, using five or six pints of such a solution at each irrigation. Severe tenesmus may be relieved by the following suppositories:

℞. Ext. belladonnæ .....gr. iss 10
Butyr. cacao. .....gr. xl 2 65
M. Ft. suppos. No. x. Sig.: One to be inserted into the rectum three times daily; or:

℞. Acidi tannici .....gr. iiss 15
Pulv. opii .....gr. ss 03
Butyr. cacao.....gr. xxx 2
M. Ft. suppos. No. i. Sig.: One per rectum three times a day.

Medicolegal.

Arbitrary Enforcement of Sanitary Code Necessary.—The Court of Appeals of New York says, in the case of People vs. Vandecarr, that, in great cities, where, in certain sections, life exists under crowded conditions that can not be fully comprehended unless seen, and where many articles for table consumption by all classes of the community are liable to pass through processes and conditions little short of appalling unless regulated by law, the full and vigorous exercise of the police power in the interests of the public health and general welfare is absolutely essential. It is quite impossible that every offender against the provisions of the sanitary code should be accorded due process of law, as embracing jury trial and the slow results of the ordinary procedure in the courts. The vesting of powers more or less arbitrary in various officials and boards is necessary, if the work of prevention and regulation is to ward off fevers, pestilence, and the many other ills that constantly menace great centers of population. It is true that there may be provisions inserted in a sanitary code that, after giving the police power full effect, are unconstitutional, violative of well-established legal principles, and subversive of the rights of the citizen. The courts are always open for the correction of such evils. But a requirement of the sanitary code that no milk shall be sold without a written permit from the board of health the court holds is reasonable, and violates neither the federal nor state constitution, and is in accordance with law and long-established precedent.

Liability for Railway Spine.—According to the Supreme Court of Louisiana, the case of Patterson vs. the New Orleans & Carrollton Railroad, Light & Power Company, was brought to recover damages for personal injuries alleged to have been sustained by the party suing in a street-car collision. He and the medical experts on his behalf testified that the injuries so received had resulted in partial paralysis. On the other hand, medical experts called on behalf of the company, whilst conceding that he was not responsible for his condition, and also conceding the possibility that such a condition might have resulted from the causes to which he attributed it, propounded the theory that he was suffering from "railway spine"; that is, that he was the victim of his imagination, and believed that he was paralyzed, whereas he was, in fact, affected by no physical ailment. Under these circumstances, the court says, that it had to choose between the alternatives of holding that the party was actually suffering from the physical disability of which he complained, or of holding that, by reason of a mental conditon for which he was not responsible, he believed that he was suffering from that disability, and as a consequence, for all practical purposes, was in the condition in which he believed himself to be. But it was not assured that he was

any more likely to get well in the one case than in the other, and as, in either case, it was the company that was responsible for his condition, it says that it was not clear that it made any difference, so far as the claim here made was concerned, which alternative was chosen. In other words, it says that as it did not appear that he was any more likely to get well in the one case than in the other, and as, in neither case, was he responsible for his condition, it was not clear that it would make any difference, for the purposes of the present claim, whether he was really paralyzed or was merely laboring under a fixed belief to that effect. But, considering the whole evidence, the court reaches the conclusion that the company's theory was not sustained, and affirms a judgment against it for $4,000 damages.

Holding of **Postmortem Without Notice to Company.**—In the case of Loesch vs. the Union Casualty & Surety Company, an action brought on an accident policy by a mother to recover for the death of a son insured for her benefit, the Supreme Court of Missouri, Division No. 1, says that, on the day after the son's death, the physician in attendance told the mother that he desired to hold a postmortem examination, to which she assented, or, at least, made no objection. He called in some other physicians to assist him, and they made a postmortem examination. After it was done, and the body was sewed up, the physicians came out of the room, and then the mother handed the attending physician the policy in suit, and asked him what she should do in regard to it. He examined it, and discovered a clause declaring that, if a postmortem be held without notice to the company in time to have its medical adviser present all claims under the policy should be forfeited. He went immediately to the office of the company, and notified them of what had occurred, and on behalf of the mother offered to hold another postmortem with their medical adviser if they so desired. But they expressed no such desire, and the mother, after holding the body until the next day, caused it to be buried. The court says that it is satisfied that the holding of the postmortem examination without notice to the company, under the circumstances shown by the evidence in this case, did not have the effect to forfeit the mother's rights under the policy. A clause of forfeiture is not to be strictly construed in favor of the company in such case. On the contrary, whilst it should be given a reasonable interpretation, yet the inclination of the court should be against the forfeiture. The design of this clause in the policy was to enable the company to learn the cause of the death of the insured, as that cause might be shown by a postmortem examination, if one should be held. Whatever such an examination might show, the company was entitled to an opportunity to know. It is a reasonable requirement under reasonable interpretation, and a violation of its terms under circumstances reasonably showing disadvantage to the company would work a forfeiture of the policy. But there was nothing in this case to indicate any such disadvantage. In the first place, it was very doubtful if the mother was responsible for the act. If it occurred without her knowledge or consent, it would be no defense to the suit. She testified that she did not know what the word meant, and did not know what the physicians were doing. But, however that might be, as soon as the attending physician saw the policy and read this clause, which was immediately after the postmortem had been held, he went to the office of the company, and informed them what had been done, and offered to allow them to make a re-examination, as before stated. There was no suggestion in the record of any fact or theory which would tend to show that a re-examination of the body at that time would not disclose to the eye of the company's surgeon everything that the first disclosed to the physicians who made it. The court does not say that the first examination might not have disclosed facts that could have been hidden from one making a second examination; but there was no such suggestion in this record, and it was not led, therefore, into such an inquiry. Wherefore, the court holds that the fact that the postmortem examination was held without notice to the company was no bar to the mother's action under the circumstances disclosed by the evidence in this case.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

September 12.

1 *Labia Urethræ and Skene's Glands. (To be concluded.) Howard A. Kelly.
2 *A Study of Uncinariasis in Porto Rico. (Concluded.) Bailey K. Ashford and W. W. King.
3 *Splanchnoptosis Caused by Omental Adhesions. Daniel H. Craig.
4 *On the Condition of the Blood in Rheumatoid Arthritis and Osteoarthritis. William G. Erving.
5 *Eclampsia. Hubert Richardson.
6 Infantile Tetany. H. C. Masland.
7 Some Notes on Nassau. Samuel A. Fisk.

1. **Labia Urethrae and Skene's Glands.**—In this article Kelly describes an anatomic formation which has apparently not been noticed by previous writers, that is, the mucous folds which surround the female urethral orifice and apparently have a protective influence against noxious vaginal discharges, etc. He illustrates various forms of these and their changes with senility. In the second part of his paper he begins the description and history of Skene's glands, the function of which is to exercise an office for the urethral orifice precisely similar to that of the vulvo-vaginal glands in relation to the vaginal orifice, to provide a lubricating fluid to protect the delicate mucosa from harmful attrition.

2. **Uncinariasis in Porto Rico.**—The treatment of uncinariasis is detailed by Ashford and King. They have come to rely on thymol given in the morning on an empty stomach in doses of 30 gr. repeated after two hours and preceded by a full dose of magnesium sulphate. If the bowels had not moved by noon another dose of salts was given. They have seen no bad effects from thymol, though such might be expected if alcoholic liquors were taken with it, as in the case reported by Thornhill. Caution, however, must be used in treating children and patients with great debility, especially in weakened heart conditions, and the dose reduced in proportion and heart stimulants and tonics given. Thymol should be repeated every eight or ten days until the ova have ceased to appear in the stools or longer if the percentage of hemoglobin does not rise. The best results in blood regeneration have been obtained with large doses of Blaud's pills and Vallet's mass. Some benefit was also derived from the use of adrenalin chlorid used as a circulatory stimulant in cases of weak heart. Of the patients treated 58 were completely cured, 25 were improved, 13 of whom are still in the hospital, and will be cured unless unforeseen accidents occur; 5 are not improved, but 3 of these are tuberculous; 6 died of anemia, 3 of tuberculosis, and 1 of pernicious malaria when nearly well of the anemia. The details of the cases are given.

3. **Splanchnoptosis Caused by Omental Adhesions.**—Craig reports three cases, and warns in the surgical treatment of these conditions against injury to the omentum. Traction on this in case of adhesion might tear the colon or do other harm.

4. **The Blood in Rheumatic Arthritis and Osteoarthritis.**—Erving reports the results of an inquiry into the condition of the blood in these diseases in some 40 cases, and finds that it is not such as would be expected in diseases of such a general wasting nature. The formed elements of the blood are practically unaffected. The slight leucocytosis noted seemed to have no relation to the duration or severity of the symptoms.

5. **Eclampsia.**—Richardson thinks that from the physiologic facts known, the similarity of symptoms of eclampsia to those of hypothyroidea, and the observations of Lange on pregnancy, it seems probable that a considerable proportion of cases of eclampsia are due to thyroid insufficiency.

New York Medical Journal.

September 12.

8 *The Value of Confirmatory Cultures in Diphtheria. John S. Billings, Jr.
9 The Roentgen Ray as a Therapeutic Agent. Cyril Fulton.
10 *Surgical Shock, with Special Reference to the Solar Plexus as a Factor. L. J. Dandurant.
11 *The Preparation of the Patient for Nose and Throat Operations Under Local Anesthesia. Nathan G. Ward.

12 *The Leucocytes in the Summer Diarrhea of Infants. John Zahorsky.
13 *The Prognosis and Orthopedic Treatment of Acute Anterior Poliomyelitis. (Concluded.) Walter G. Stern.
14 *Straight Splints in Elbow Fractures. J. Hubley Schall.

8. **Diphtheria.**—The usefulness of confirmatory cultures in diphtheria is discussed by Billings, who finds that while in a certain small percentage of cases the diphtheria bacillus fails to appear in the first cultures, the failure is generally due to a conjoined infection with the septic micrococci. Aside from these cases, the statement that the case is probably not diphtheria can be made on one negative culture up to the tenth day of the disease. Valid reasons for requesting a confirmatory culture in negative cases are: 1. Where there is no growth whatever on the culture media; 2, where there is complete contamination and liquefaction of culture media, in cases which are clinically diphtheria; 3, cases where there are suspicious bacilli; 4, in croup cases where the membrane is limited to the larynx and the duration of the disease is less than five days. Dryness of culture media, scanty growth and the recent use of antiseptics with satisfactory growth of other organisms than the diphtheria bacilli, do not alone furnish sufficient grounds on which to request a confirmatory culture. These regulations govern the system of second cultures in the diagnosis laboratory of New York City.

10. **Shock.**—Dandurant notices particularly the type which he calls the solar plexus shock characterized by a lack of symptoms, except rapid and erratic heart action and pulse. He thinks in the majority of these cases the perverted condition of the solar plexus is a factor in the production of the phenomena.

11. **Nose and Throat Operations.**—The importance of preliminary treatment for nose and throat operations under local anesthesia is insisted on by Ward, who outlines it as follows:

1. Local treatment, to free the nose and nasopharynx from mucus and relieve congestion.
2. Laxatives, diaphoretics and diuretics, to stimulate elimination.
3. Tonics, to tone up the nervous centers and restore general functional activity.
4. Atropin, to prevent reflex inhibition.

These precautions will assure less shock, prevent complications and hasten repair.

12. **Summer Diarrhea of Infants.**—Zahorsky concludes with Knox and Warfield that the leucocyte count in this condition is too variable to be of special diagnostic importance, but holds that the differential count is extremely valuable in the estimation of the intensity of the intoxication. The normal ratio of the polymorphonuclears to the lymphocytes in healthy infants is 2 to 3 or 4. In gastroenteric disease this ratio becomes changed; the leucocytes gradually increase and the lymphocytes diminish, when the ratio becomes 1 to 1, 4 to 3, etc. This predominance of polymorphonuclears, therefore, reveals an intensity of the morbid process and means that the baby is pretty sick, whatever other signs may indicate.

13. **Acute Anterior Poliomyelitis.**—The orthopedic treatment of this condition is described by Stern, who insists on the importance of treatment, if only to prevent deformity, and gives details as to tendon transplantation, arthrodesis, etc.

14. **Elbow Fractures.**—Schall advocates the use of straight splints extending from the upper third of the arm to the wrist with slight divergence at the elbow, the hand and arm being kept supine. To prevent the olecranon from becoming displaced, small strips of adhesive plaster were passed just above the fragments down and around the splint. He objects to complicated fracture dressings in injuries about the elbow, and to the extremely flexed position.

Medical News, New York.

September 12.

15 *Infantile Scorbutus. Thomas M. Rotch.
16 *Notes on Experimental Surgery. A Modification of the McGraw Elastic Ligature. J. W. Draper Maury.
17 *A Proposed Apparatus for the Treatment of Empyema. Francis M. C. Usher.
18 The Advisability of a More Definite Course of Instruction in Physics in the Medical Curriculum. Allen J. Smith.
19 Mental Therapeutics in Medicine. J. M. Alkin.
20 *Uses and Limits of Non-Physical Therapy. Smith Baker.
21 *The Significance of Albumin and Casts in Surgical Patients. John C. Munro.
22 Later Impressions of the "Non-heredity of Acquired Characters." Lewis S. Blackwell.
23 *Therapeutics of Potassium Copaibate. Louis Kolipinski.

15. **Infantile Scorbutus.**—Two cases are reported by Rotch to impress on the profession the great care that should be taken to differentiate between the advanced bone lesions of this disease and those of osteomyelitis and osteosarcoma. In the first case, three separate operations had been performed and a large portion of the tibia removed. The diagnosis of infantile scorbutus was suggested by him in consultation and orange juice recommended, followed by the steady improvement in the condition of the child. In the second case scorbutus was diagnosed as probable, and a diet of plain cow's milk and orange juice employed with excellent results, though there was very marked swelling of the bone suggesting the presence of osteosarcoma, and it had been suggested that amputation for osteosarcoma would be needed.

16. **The McGraw Elastic Ligature.**—Maury has employed the McGraw elastic ligature in such a way as to insure its "punching out," instead of leaving a linear aperture which may be broken up by adhesions. He makes a square stitch, the technic of which is described as follows:

Decide on the size of the square desired, and, after approximating the surface, gut and gut or stomach and gut so that there may be no unnecessary tension, place a Lembert stitch of silk to join the two viscera at each of two points destined to be the diagonally opposite angles of the completed square. These stitches will hold the parts together and will serve as guides for the introduction of the ligature. The needle is introduced into one of the apposed viscera at a point selected for one of the remaining angles and brought out beside one of the guides. From here it is passed through the opposite organ, care being taken that the needle thoroughly pierces the mucous membrane—which is somewhat resistant in a dog but not so in a pig—and out again at a point diagonally opposite the starting place. From this point to the point of beginning the steps are directly reversed, viz.: the needle re-enters the first viscus, emerges at the first guide, re-enters the second viscus and emerges as nearly opposite the starting point as possible. The stitch is then just half done; two sides of the square are completed, and the arrangement of the elastic ligature may be correctly represented by a figure 8 bent in the middle. The remaining two sides of the square are completed in the same manner, care being taken to make the distal loops of the two figures of 8 interlock.

He gives and illustrates the results of experimental work with this on dogs and offers the following conclusions:

1. The McGraw elastic ligature can be so inserted as to "punch out" as large an area of the juxtaposing walls as may be desired, with at least as much certainty and with greater safety than the Murphy button.
2. That the margins of such openings are smooth and not unduly cicatrized.
3. That the elastic ligature may remain *in situ* after punching the openings, although this is less likely to happen if tied with iodized catgut.
4. That such retention in the mucosa of so soft a material is not apt to be harmful or permanent.
5. That the time required is not sufficiently increased to render the use of this technic impracticable.
6. That perhaps enough has been suggested to stimulate further research by others, so that the actual facts in these most interesting problems may shortly be brought to light.

17. **Empyema.**—The apparatus suggested by Usher consists of a metal box with a screw cap arranged for the application of suction, etc., and fastened down to the body so as to exclude air by means of rubber plaster or bandage rubber.

20. **Non-Physical Therapy.**—Baker thinks that quacks and irregulars, honest and dishonest, are defining a field of non-physical therapy, which needs investigation by the highest skill and training and promises favorable results.

21.—See abstract in THE JOURNAL, xl, p. 1669.

23. **Potassium Copaibate.**—This preparation, which Kolipinski finds decidedly advantageous, is prepared by mixing 8 parts by weight of copaibate with 1 part of potassium hydrate in a small quantity of water. On stirring, saponification results. By standing three or four days, the volatile oil stays at the top, potassium copaibate in the middle, and the lowermost layer is the residue of uncombined alkali in water. It is gelatinous at 50 F., thick and oily at 63 F., and quite liquid at 70 to 80 F. Its reaction is alkaline. It dissolves rapidly in alcohol, ether, and chloroform. It is best given in gelatin capsules in doses of 50 to 150 gr. per day. Four to twelve capsules represent the average daily amount. The average man will tolerate two capsules three times a day; robust men twelve daily, and those easily purged will not be able to take more than four for some length of time. Its by-effects are similar to those of the crude drug,

though less severe. It has all the virtues commonly ascribed to copaiba, with special ones due to its solubility, and it is more palatable than the latter. It reduces the danger of complications to a minimum so that gonorrheal bubo, epididymitis, cowperitis, prostatitis, vesiculitis, cystitis and stricture are seldom seen to arise.

Boston Medical and Surgical Journal.

September 10.

24 *Cancer of the Intestine, etc.; Its Surgical Aspect, with Report of Cases. Homer Gage.
25 *The Relations Existing Between Respiratory and Intrapelvic Diseases. Daniel H. Craig.
26 Carcinoma of Choroid Metastatic from Prostate. Allen Greenwood.
27 A Case of Carcinosis, with Secondary Nodule in the Eye. E. E. Southard.
28 Mechanical Vibration: Its Theory and Application in the Treatment of Disease. Maurice F. Pilgrim.

24. **Cancer of the Intestine.**—Gage first notices the unfavorable statistics of Fitz and then reviews the results of Korte, McEwen and Krönlein, which he thinks to a certain degree are favorable, especially in cases of ileocecal cancer. Four cases are reported by him, two of which were apparently quite successful. In 2 the acute intestinal obstruction was the first indication of the existence of any serious trouble, and he remarks that the diagnosis in these cases can not be made without exploratory incision, and when symptoms suggest a chronic appendicitis, or obstruction, its desirability is evident. If the disease, however, has invaded the mesentery, lymphatics, etc., he would not operate further, and he would confine the use of the exploratory incision to cases in which the earliest symptoms were those of acute intestinal obstruction, appendicitis and chronic intestinal disturbance where there is a clear presumption against very advanced malignant disease. As regards colostomy, while it may be useful, he thinks it can have only imperfect and merely temporary good effects.

25. **Ovarian Prolapse.**—Craig's paper makes the point that reflexes or contrecoup from above in coughing, etc., with rigid chest and abdomen are responsible for ovarian prolapse, and details some of his experiments to determine the amount of force thus produced. He finds that a pressure of 14 ounces causes complete prolapse and that the force engendered by coughing is slightly in excess of that required. The wearing of corsets has much to do with producing the bad results. He suggests that the congestion of menstruation in conjunction with that of respiratory diseases is always harmful and should be guarded against even in the nulliparous, and that corsets had better be proscribed during any severe or long persistent cough-accompanied lesion, especially during the catamenia. By requiring the patient to assume the prone position for a few minutes after violent coughing, disengorgement of the pelvic vessels is favored and gravity assists the ovarian supports. If ovarian or pelvic involvement is suspected, the pelvic respiratory massage suggested by Williams may be of advantage. This consists in having the patient assume the genu-pectoral or knee-elbow posture and aspirate the pelvic vessels by slow force-expiration about fourteen times per minute.

Medical Record, New York.

September 12.

29 *Post-typhoid Sepsis. Francis Delafield.
30 *The Joint Complications of Acute Pyogenic Osteomyelitis, with Especial Reference to the Treatment of the Purulent Forms of Arthritis. A. A. Berg.
31 Ancient Jibes at the Doctors. Jonathan Wright.
32 Some Experiences with Ichthyol in Puerperal Fever. J. D. MacPherson.
33 *The Surgical Treatment of Colitis. C. L. Gibson.

29. **Post-Typhoid Sepsis.**—Delafield illustrates cases of typhoid with relapses during convalescence, rigors, chills, etc., which he thinks indicate that at the end of typhoid fever there may come in a new infection resembling the streptococcus infection, either mild or severe. He suggests that with care this can be usually distinguished from typhoid, and the practical point is that it calls for different management. The best results are obtained if the patients are fed and taken out of bed.

30. **Purulent Arthritis.**—Berg points out the indications for operation in acute joint disease, the necessity for careful blood cultures beforehand as an essential for treatment and the importance of evacuation and drainage in case of suppuration. In the mild forms there is very little tendency to the destruction of the synovial membrane or ligaments, and septic symptoms are not severe, but in the severer cases there is more or less destruction. For the milder grades the old methods of single or multiple incision of the joint, evacuation of the exudate and drainage give very good results and may restore the joint to perfect function. In the severer cases he follows the plan of Mayo of making a transverse anterior incision through the patella into the joint, with partial dislocation of the femur and the tibia by extreme flexion and dry packing of the synovial cavity. Of course, this destroys the future function of the joint, but this can not be avoided in any case, and he suggests from his experience that good results may follow the same treatment in the other large joints, especially the elbow, ankle and wrist. In the after-treatment of arthritis immobilization of the joint should be employed until the acute inflammation subsides and then passive motion cautiously applied. Forcible passive motion is to be deprecated. For the periarthritis, the Priesnitz cold pack, combined with douches and massage are employed with satisfactory results. The pseudoarthritis and periarthritis leave no ultimate impairment of the joint function, nor do the serous, serofibrinous or catarrhal types of arthritis, though prolonged drainage of the joint for pyarthrosis is usually followed by fibrous ankylosis. This, however, varies, and he has had cases where the joint function was completely recovered.

33. **Colitis.**—Gibson's method, suggested in 1902, is briefly redescribed. It consists particularly in reproducing the technic of Kader's gastrostomy, making a valvular opening into the intestine and introducing a drainage tube through which treatment can be carried on. When it is removed the valvular arrangement completely closes it, and to obtain permanent closure of the fistula when required it is only necessary to discontinue the treatment by omitting to pass the catheter into the gut. The Weir modification of this, with the use of the appendix, has the apparent advantage of making the simple operation still simpler, but the valvular formation is wanting and the after-treatment is less agreeable. Gibson says that the results of this operation have been such as to justify the hope of marked amelioration or cure of the symptoms, while it offers the advantage that it is devoid of every disagreeable feature of an artificial anus. It calls for only a short confinement to bed. If a prolonged course of treatment is required, it may be carried out if necessary by the patient himself. A change of climate, so often beneficial, is made possible. Its performance is perfectly simple and safe. The intermuscular incision greatly reduces the risk of a subsequent hernia, and the prompt closure of the fistula is certain and spontaneous.

Cincinnati Lancet-Clinic.

September 12.

34 Intraligamentous Sarcoma of Right Broad Ligament Arising from Periosteum of Second Sacral Vertebra. J. M. Withrow.
35 Hematoma of the Ovary. P. C. Layne.
36 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

St. Louis Medical Review.

September 5.

37 Nasal Monstrosities in Italy Before the Age of Augustus. Emory B. Lease.

American Gynecology, Baltimore.

August.

38 *Urine Changes in Pregnancy and Puerperal Eclampsia. E. L. Whitney and Clyde A. Clapp.
39 *The Diagnosis and Prognosis of Tuberculosis of the Kidney and Ureter. J. Wesley Bovée.
40 *The Value of Conservative Operations on the Uterus and Its Appendages. W. P. Manton.
41 *Suburethral Abscess, or Incomplete Internal Urethral Fistula; Report of Three Cases. C. Jeff Miller.
42 The Card System in Gynecology. H. J. Boldt.

38. **Urine Changes in Pregnancy.**—Whitney and Clapp describe elaborately their methods of urine examination, and proclaim that there is an unmistakable tendency during pregnancy for a lessened output of urea nitrogen, together with a

slight increase of ammonia nitrogen as compared with the non-pregnant condition. In eclamptic women urine analysis shows that the essential change consists in a decrease in the percentage of nitrogen which is eliminated as urea, with an increase of the amount which is precipitated by phosphotungstic acid and readily decomposed by heating with sulphuric acid at a temperature of 160 C. Unfortunately our knowledge is incomplete as to the exact nature of these substances. In some cases, they think, the loosely combined nitrogen is derived from ammonia and in others it may be attributed to some as yet undetermined antecedent of urea. The variability of the ammonia increase in the different cases is attributed to the fact of the imperfect metabolic processes, the proteid destruction not proceeding as far as the ammonia stage, while in other cases the ammonia is retained either in the body fluids or stored up in excessive quantities, especially in the nervous system. We are still in the dark as to the cause of the alteration in metabolism that characterizes eclampsia. It is possible that the hepatic function may be in some cases at fault; the fact that the urinary changes last after delivery for some time would seem to indicate that the hepatic lesions do not immediately disappear after delivery. Further study will be required to fully elucidate the question, and to determine whether these urinary changes are constant enough to be of value in predicting the occurrence of eclampsia.

39.—See abstract in THE JOURNAL, xl, p. 1526.

40. **Conservative Gynecology.**—Manton reviews his experience in 62 conservative operations on the uterus and appendages in 53 patients. There have been 94.3 per cent. symptomatic cures, 5.6 per cent. of failures with no deaths. The mortality seems to have certainly been better in these cases than with the ordinary radical operations. The general health of the patients and the maintenance of normal function of the reproductive organs are also to be taken into account. Pregnancy has occurred since in 5.6 per cent.

41. **Suburethral Abscess.**—Miller describes three cases of this condition, one apparently due to an urethral diverticulum, one possibly of gonorrheal origin, and one probably originating in Skene's glands or in one of the urethral crypts. The symptoms are principally painful urination, sensation of heat and distress. Palpation will detect the thickened edges if the trouble follows periurethral inflammation. The urethral speculum is of use in revealing the locality of the pus discharge. The treatment that he advises is surgical; prompt incision and perhaps excision of the sac. After incision of the sac, a retention catheter should be worn for a time or the bladder at least emptied at regular intervals with a soft rubber catheter to prevent contamination of the wound.

American Journal of Insanity, Baltimore.

July.

43 *Presidential Address, American Medico-Psychological Association. G. Alder Blumer.
44 *The Symptomatology and Treatment of Traumatic Insanity. A. B. Richardson.
45 *Results of Brain Surgery in Epilepsy and Congenital Mental Defect. William P. Spratling.
46 *Additional Notes on Tent Treatment for the Insane at the Manhattan State Hospital, East. A. B. Wright and C. Floyd Haviland.
47 *A Consideration of the Hereditary Factors in Epilepsy. R. E. Doran.
48 *Prevalence of Insanity in California. John W. Robertson.
49 *The Nature and Genesis of an Insane Delusion. J. W. Wherry.
50 *Examination of the General Cerebrospinal Fluid in General Paralysis. Jost D. Kramer.
51 *Hospital Provision for the Insane Criminal. H. E. Allison.
52 Address on the Death of Dr. A. B. Richardson. H. C. Rutter.

43.—This article appeared elsewhere. See THE JOURNAL of July 25, ¶81, p. 284.

44. **Traumatic Insanity.**—Richardson does not recognize any special symptomatology of mental disturbances from trauma, though he describes a certain class of cases that may be the result. Many of the symptoms, however, belong to the neurotic rather than the psychic type, and these are intermingled in nearly all cases. Even in the purely functional neuroses there is the psychic disturbance, the relation of the *ego* to the environment is disturbed, the judgment is at fault, the emotions are deranged and the mental strength somewhat diminished. In the great majority of cases, moreover, there is a complication of a prospective damage suit which in some cases is the principal cause of the disorder, though the patient may be perfectly honest. Settlement of the suit will sometimes entirely remove the trouble without any evidences of intentional malingering.

45. **Brain Surgery in Epilepsy.**—Spratling gives the results of operation in 33 cases of epilepsy. In 21 there was no improvement; in 8 the attacks lessened, but operation was only a part of the treatment and not the most effective in his opinion. In 3 the condition was aggravated. In one a gynecologic operation seemed to produce recovery, the uterus being a retention cyst it was removed with all appendages. The patient has been free from the disease since that time. She had had an operation on the brain for traumatic trouble, to which the epilepsy was attributed, but this did not relieve, as the epilepsy was evidently the result of an autointoxication. In none of the cases was operation itself fatal, which is in contrast to the results in idiocy, where there is considerable mortality. He also reviews the effects of surgery in 111 cases of idiocy. The improvement was comparatively insignificant. He says surgical interference may be still used in isolated cases of idiocy, but it seems clear that it is slowly finding its position in rational surgery along a plane far lower than what at first seemed possible at the time of its inauguration.

46. **Tent Life for the Insane.**—Wright and Haviland report very encouraging results from the care of the insane in tents, aiding not only the tuberculous patients, but as also of use in other forms of insanity. They think it is worthy of application as a therapeutic measure in the modern treatment of insanity.

47. **Hereditary Factors in Epilepsy.**—Doran analyzes a number of cases of epilepsy and calls attention particularly to the following points noted in the study of heredity in the histories of 1,300 epileptic patients in a public institution:

Though it was impossible to secure data in many cases, yet a definite history of the various neuroses of alcoholism was found in 46.5 per cent. of the total. Alcoholism, epilepsy and insanity combined were responsible for 38.6 per cent. of the total cases. and paternal alcoholism existed in 18 per cent. of all cases. Diseases other than those connected with the nervous system have little hereditary influence in epilepsy. The age of onset is influenced by the character of the heredity.

48. **Insanity in California.**—California is now just a little over fifty years old. In its beginning insanity was almost unknown, but in 1860 the ratio was 1 to 1,000, in 1870 it was 1 to 500, and at present the registered insane number 1 to 260 of the general population. There are a number of reasons given by Robertson for this large ratio: One is the universal state care, bringing out all the cases; another is the large proportion of mental derangement in the foreign-born population, due to change of environment, homesickness, etc. The foreign born do not comprise more than 25 per cent. of the population, but they supply 57 per cent. of the insane, and immigrants from other states also furnish a considerable proportion. Heredity does not figure conspicuously, but the mild climate favoring long hours of working, etc., the briefness or absence of vacations, etc., all have their influence. Education and age seem to have but little necessary effect, but the disproportion of men to women is remarkable. Of the 5,494 patient, 3,448 are men. He speaks particularly of beer drinking as a cause. California beer contains 3 to 5 per cent. alcohol and the drinking of twenty steins, which is not unusual for some, means the absorption of 12 ounces of alcohol. Neither whiskey nor wine, though they may be more stimulating, are so insidiously poisoning. In conclusion he notes the difficulties of ascertaining the correct statistics for comparison as in many other states the number of insane reported is evidently only those acutely insane, those that happen to be under special care, or those who have been committed as deranged.

49. **Insane Delusions.**—Wherry sums up an insane delusion as an idea born in subconscious cerebration; projected into consciousness in times of stress; believed implicity and strenuously defended by the originator, but which no one else will accept as true.

50. **Cerebrospinal Fluid in Paresis.**—Kramer has studied the composition of the cerebrospinal fluid in 11 cases of paresis, 13 cases of dementia precox and several cases of other forms of insanity, counting the number of leucocytes. He finds that the results agree with those of Joffroy and Mercier in the greater prominence of leucocytosis in paretics. He thinks that the method may be a valuable one in making the differential diagnosis in doubtful cases.

51. The **Criminal Insane.**—The care of convicts and criminals committed as insane is discussed by Allison, who urges greater vigilance on the part of prison officials to detect insanity, and the erection of special hospitals for the criminal and dangerous insane and the commitment thereto by judicial order of all that belong to that category that they may be kept until fit to be released. Lastly, in all institutions for the care of criminals and defectives there should be greater vigilance in ascertaining the personal history of each inmate with a view to detecting and deporting all aliens who may have entered the country in violation of the immigration laws.

Annals of Surgery, Philadelphia.

August.

53 *Thyroidectomy and Sympathectomy for Exophthalmic Goiter. B. Farquhar Curtis.
54 *The Surgical Treatment of Exophthalmic Goiter. John B. Deaver.
55 Bilateral Bony Ankylosis of the Temporomaxillary Articulation of Traumatic Origin and Its Surgical Treatment. W. J. Roe.
56 *The Anatomy of the Inferior Ethmoidal Turbinate Bone, with Particular Reference to Cell Formation; Surgical Importance of Such Ethmoid Cells. Howard A. Lothrop.
57 *The Gradual Surgical Occlusion of Large Arteries: Its Relative Advantages, Together with an Experimental Inquiry as to Its Feasibility. Robert T. Stratton.
58 *The Treatment of the Peritoneum in Diffuse Peritonitis. Joseph A. Blake.
59 *A Proposed Method of Retroduodenal Choledochotomy for the Removal of Impacted Calculi in the Retroduodenal and Papillary Portions of the Common Bile Duct. Albert A. Berg.
60 *A Chemical Hypothesis for the Etiology of Cancer. John Rogers, Jr.
61 *The Method of Infection of Actinomycosis in Man. Fritz Maass.

53.—See abstract in THE JOURNAL, xl, p. 1669.

54. **Exophthalmic Goiter.**—Deaver concludes as follows from his observations and the study of others' work:

1. That, as surgical treatment is recognized as the most satisfactory in exophthalmic goiter, so is complete bilateral cervical sympathectomy to be considered the operation of choice. 2. The operation should not be performed during the height of psychical irritation or tachycardia, nor by an operator who has not an absolute knowledge of the anatomy of the neck and a large experience in dealing with difficult operative procedures, or the means at hand to cope with any emergency. 3. The results of the operation are far better than the other procedures, the mortality is much lower and, in cured cases, the improvement is permanent. 4. In chronic glaucoma, especially after the failure of iridectomy and sclerotomy, this operation may restore vision completely, unless the disease is too far advanced, with absence of light perception. 5. In recurring attacks of epilepsy, sympathectomy should be resorted to. The results warrant the operation. Jonnesco has reported 12 cures and 4 improvements in 49 epileptics operated on before 1899.

56. **The Inferior Ethmoidal Turbinate.**—Lothrop's article is largely anatomic, describing and illustrating the conditions in the nose with special reference to cell formation in the inferior ethmoidal or middle turbinate, which may in certain cases produce trouble. The treatment of the condition is surgical.

57. **Gradual Occlusion of Large Arteries.**—Stratton has experimented on dogs with gradual occlusion of large arteries with special reference to its feasibility as a preliminary to permanent ligation, extirpation of tumors and other operative procedures. While it is impossible to exactly compare the conditions in lower animals with those in man, he thinks the method has its advantages and may be of decided value where closure of the abdominal aorta is concerned, not, however, for permanent ligation, as that would be fatal, but in arteries of lesser caliber, except for special reasons which might determine its use for aneurism. The forcible or weak blood current, together with the presence or absence of arteriosclerosis and the accompanying lack of general tissue-vigor, would determine the desirability of adopting gradual closure or ordinary ligation.

58.—See abstract in THE JOURNAL, xl, p. 1595.

59. **Retroduodenal Choledochotomy.**—The method proposed by Berg is practically as follows: A small, round, hard cushion should be placed under the lower dorsal region of the patient, throwing the parietes forward. Next, abdominal incision through the right rectus from the costal arch to the umbilicus. Then free exposure of the descending portion of the duodenum, separation of adhesions, division between the two ligatures if vascular. The liver is drawn upward by a broad retractor, the stomach pushed over to the left and the transverse colon downward by gauze compresses and held away by the assistant. Next, mobilization of the descending duodenum: Three or four cm. external to the right border of the duodenum, the posterior parietal peritoneum is incised in a longitudinal direction from the flexure of the duodenum above to the transverse mesocolon below. Then with the finger the internal or left portion of the divided peritoneum is elevated from the parietes up to the right duodenal border; the finger is passed behind the duodenum, gently separating it up to its inner border, from the vertebræ, inferior cava and aorta. It is now only loosely fixed at its flexure above, at the transverse mesocolon below, and along its inner concave margin, and is easily rotated to the left around a longitudinal axis passing through its inner margin. This brings its posterior surface and the retroduodenal and papillary portions of the common duct anteriorly, and affords an excellent exposure. The duodenal branch of the pancreatic duodenal artery lies anterior to the duct about one-fourth of an inch. The accompanying vein lies just behind the duct and sometimes a branch of the vein crosses it. The superior mesenteric branch of the portal vein is considerably internal to the duct and the vena cava posteriorly to it. The duct is readily recognized and can be grasped between the fingers, incised, and impacted calculi removed. The site of incision into the duct should be covered by a narrow wick of gauze and the descending duodenum allowed to fall back to its original position. If drainage of the common bile and hepatic duct is required, the common duct is incised in its free portion in the gastrohepatic ligament, and a drainage tube inserted into this opening. The incision into the retroduodenal portion of the duct can be easily sutured, though this should not be necessary. This operation works well on the cadaver, and he asks those who think well enough of it to try it and report results.

60. **Cancer.**—Rogers suggests as a theory of the etiology of cancer that it is due to enzymes assimilating from the blood the carbohydrate to form the glycogen necessary for the life and growth of the cells, and by an excess of nutriment causing outgrowth beyond the natural limits in the shape of malignancy. That there is an enzyme in cancerous tissue has been shown by Buxton in a yet unpublished document, though he does not affirm that its amount is in proportion to the malignancy, but this the author suggests as an inference. He applies this theory to the clinical facts and reports experiments which are as yet, however, incomplete.

61. **Actinomycosis in Man.**—Maass offers the following as facts or disputed points made prominent by the cases of actinomycosis which form the basis of his paper:

1. The diagnosis of "primary pulmonary actinomycosis," even in the absence of all abdominal symptoms, must remain doubtful without a postmortem examination. 2. In abdominal, as well as in pulmonary actinomycosis, the patient should be closely questioned regarding any previous more or less indistinct symptoms of appendicitis and sores at the anus. 3. Fecal concrements found in the appendix in cases of actinomycosis should be microscopically examined. 4. In actinomycosis following typhoid-like symptoms, a Widal test should be made. 5. At the postmortem special attention must be paid to intestinal scars, which may easily avoid detection. 6. Experiments and clinical observation indicate that the fungus can not enter the human or animal body without a wounded surface. 7. Must the wounded body also be the carrier of the infectious material, or can infection take place secondarily through a granulating accidental wound or the chronic ulcers described? 8. Human actinomycosis of the skin or actinomycosis of the jaw in pasturing cattle may offer a suitable object for investigation in regard to point No. 7.

Alienist and Neurologist, St. Louis.

August.

62 *Unrecognized Toxic Insanities. T. D. Crothers.
63 *Outlines of Psychiatry in Clinical Lectures. C. Wernicke.
64 *Consideration of the Medicolegal Aspects of Aphasia. Charles H. Hughes.
65 *Subcutaneous Drainage in the Surgical Treatment of Hydrocephalus Internus. Nicholas Senn.

66 Idiopathic Bilateral Atherosis. V. Krafft-Ebing.
67 *Mixoscopic, Adolescent Survivals in Art, Literature and Pseudo-ethics. (To be continued.) James G. Kiernan.

62 (and 172). **Unrecognized Toxic Insanities.**—Crothers holds that toxic insanities, especially from drugs and spirits, are increasing. This is evidenced not only by the records of courts and hospitals in the degenerate classes, but also in the higher walks of life where unexpected crimes or aberrant conduct startles society. When these are studied they are found to be dependent largely on alcohol and drug habits. Close study, he says, reveals a distinct origin, progress and development of these degenerative psychoses with progressive brain and nervous disorders. Alcohol is the most prominent of these causes, but it is a probable fact that a large per cent. of all insanities occurring in the more well-to-do classes are directly or indirectly the result of alcohol or drugs, and are largely unrecognized except in the later stages, and then often do not attract attention except by accident. The changes in the conduct, character, habits, etc., in alcohol and drug users can only be explained as true psychoses. He remarks that fully one-fourth of medical practice in this country among the better off is directed to the correction of injuries produced by these habits, though the actual psychologic condition is often unrecognized and unknown. Among the lower classes it is evident that a very large proportion of the crime and insanity is due to this cause.

63. **Acute Hallucinosis.**—In this lecture Wernicke describes a case of hallucinatory paranoia, a type of psychosis, under this name, and which must be differentiated from delirium tremens from the simple acute psychoses of apprehension and from cases of chronic development. In former writings he has called it chronic hallucinosis. The course of the disease is characterized by acute, rapid onset and the descending condition of its curve. Its treatment is only possible in the acute stage at an insane asylum, and under these circumstances the prognosis is favorable, but it is quite frequently only the initial stage of a rapidly progressive sensory psychosis, which, he says, deserves the name of acute progressive hallucinosis.

64. **Aphasia.**—In this lecture Hughes notices the medicolegal bearing of aphasia, taking the view that if a patient is conscious of his crippled condition and attempts to compensate for it, he is capable of making legally valid wills or documents. The severe forms of altered speech utterances due to irritation of the speech centers or their psychologic areas are also alluded to, such as the gibberish of idiocy, but more especially the irritative functional sort of the disorder involving the speech center, such as a tendency to verbal autorhythmic forms of speech repetition. The repetition of a word, tone or phrase is more characteristic of the transitory functional disorders than of organic speech center damage. They are mostly examples of mental aberration with coexistent speech center rhythmic excitation, and we should be guarded and not mistake the counterfeit for the genuine aphasia.

65. **Hydrocephalus Internus.**—Senn reports a case of attempted subcutaneous drainage of an internal hydrocephalus, the object being to avoid infection. The patient died rather unaccountably—no postmortem was allowed—though marked improvement seemed to follow the operation. The case indicates to him, however, that subcutaneous drainage is preferable to open drainage, and proves conclusively that the cerebrospinal fluid is quickly absorbed by the connective tissue elements as soon as it escapes from the ventricle.

67. **Myxoscopic Adolescent Survivals.**—Kiernan, in this installment of his article, notices the cases of Pope, Rousseau and Sacher-Masoch as instances of this type. The histories and comments are interesting and instructive. They illustrate, he thinks, how adolescent storm and stress often dominate mentally long after adolescence, even in those who have apparently passed through the period without nervous breakdown. Many instances of morbid mentality show that the relationships between genius and idiocy are of this kind.

Archives of Otology, New Rochelle, N. Y.

August.

68 *Should the Deaf Be Debarred from Accident Insurance? James A. Spalding.
69 *Tinnitus, with a Plea for Its More Accurate Musical Notation. James A. Spalding.
70 The University Clinic for Diseases of the Ear and Throat in Rostock. O. Koerner.
71 Three Clinical Communications to Otology (Scotoma Auris, Syncope, etc.).

68. **Deafness and Accident Insurance.**—Spalding notices his own case and concludes from his personal experience and study that owing to the greater care the deaf person takes of himself because of his defect, and his better perception of sounds in street noises, than in the case of those who can hear, and also in his better bone conduction by which he readily becomes aware of approaching danger, he is as good a risk against pedestrian accidents as are those who can hear well.

69. **Tinnitus.**—Spalding has studied the musical pitch of tinnitus and suggests the usefulness of testing this. He thinks in some cases it may be of practical value both in the relief of the condition and, if it is true, as Zaufal has suggested, that there is a certain set of auditory cells more easily affected by irritation than others, we can probably in no better way discover what those cells are and where they are situated in the labyrinth than by studying and investigating their location-pitch as exhibited by their tinnitus when they are irritated.

Annals of Ophthalmology, St. Louis.

July.

72 *The Accommodative Asthenopia of Donders. George J. Bull.
73 *Why Not Employ Intra-capsular Irrigation in Cataract Operations? H. O. Reik.
74 A Case of Tuberculosis of the Conjunctiva; Recovery without Local Interference. F. L. Henderson.
75 Papillomata of the Conjunctiva and Cornea. R. H. Johnston.
76 A Clinical Lecture on the Art of Extracting for Cataract. C. Bell Taylor.
77 Report of a Case of Purulent Metastatic Ophthalmia in Meningitis, Giving Rise to Meningitic and Sympathetic Symptoms After Thirteen Years; Enucleation; Recovery. C. Zimmermann and Brown Pusey.

72. **Accommodative Asthenopia.**—Bull argues that the so-called accommodative asthenopia of Donders is more a disorder of function of the motor nerves of the eye than of the accommodation or refraction. He asks whether the name accommodative asthenopia should be maintained, and whether the term muscular asthenopia should not be limited to cases of insufficiency of the internal recti.

73. **Intracapsular Irrigation.**—Riek advocates the use of intracapsular irrigation in cataract operations and finds that he is in accord with McKeown in favoring this method. His conclusions are in substance that the introduction within the eye of sterilized saline solution is harmless, and that the removal of cortex is a mechanical process and regulated by ordinary physical laws, and that from the anatomic structure and conditions irrigation is more efficient in removing cortex than any other method. It also removes blood and bubbles of air. It shows the condition of the capsule, gives tone to and replaces the iris and is effectual in making the toilet of the wound. Free irrigation by the nozzles may be practiced without fear. The irrigation does not tend to cause prolapse of the vitreous, and secondary operations are required in a very small percentage of cases.

Journal of Eye, Ear and Throat Diseases, Baltimore.

July-August.

78 *The Bacteriology of Acute Otitis Media. E. C. Ellett.

78. **The Bacteriology of Acute Otitis Media.**—From a study of cases, including some 40 in private practice, in which bacterial determinations were made, Ellett concludes that all the usual varieties of pyogenic organism are associated, apparently as the cause, with acute otitis media. We can not tell from a bacteriologic study which cases are likely to prove severe and of long duration or mild and brief. A classification of otitis media from a bacteriologic point of view is possible, if care is taken, but its value is questionable.

Ophthalmic Record, Chicago.

August.

79 *How Shall We Open the Capsule? A. J. Erwin.
80 Interstitial Keratitis, Complicating Ophthalmia Neonatorum. Alvin A. Hubbell.
81 Complete Absorption of an Injured Crystalline Lens in a Man 46 Years Old. G. F. Keiper.
82 *Concerning the Terms Antimetropia and Anisometropia; Brachymetropia and Hypometropia in Place of Myopia; Hypermetropia and Hyperopia. G. F. Suker.

79. **Capsulotomy.**—Erwin advocates opening of the capsule and describes his method. After dilating the pupil he passes the cataract knife in the corneal margin at the equator. Then advancing on a plane declining 10 degrees from the horizontal he transfixes the capsule, then raises the point of the knife and counter punctures the cornea two or three mm. above the equator, and completes the corneal flap in its clear margin. Unless the capsule is especially brittle the knife will pass up under it to the pupillary margin, cutting a smooth central flap about the size of the ordinary pupil, which will be enlarged by the passage of the lens. This large flap will naturally fall to the lower segment of the capsule, leaving a clear pupil. This operation, he thinks, is so safe and complete and easily done he wonders why it has not been generally adopted. His last one hundred cases thus operated on have not shown a single case of sepsis, iritis or luxation, and only 8 cases have required a secondary operation.

82. The **Correction of Ophthalmic Terms.**—Suker pleads for the more correct use of the terms antimetropia and anisometropia, the former meaning a different kind of refraction and the other an unequal amount or degree of the same kind of refraction in the two eyes, supplanting a less useful term at the present time. He also suggests the use of brachymetropia and hypometropia in place of myopia and of hyperopia as expressing the relative amount of sight of one eye in comparison with the other without any reference to its actual refraction—simply the greater acuity of vision—instead of confusing it with hypermetropia, as is too often the custom. He notices the various definitions of these words and shows the present confusion in their current use. He urges that the term myopia should be discarded, as in its basic sense it signifies merely blinking or winking.

Washington Medical Annals.

July.

83 *Three Cases of Tetanus Successfully Treated. J. Ford Thompson.
84 Report of a Case of Malta Fever in Washington, D. C. W. B. Banister.
85 The Practical Mosquito Work Done at Havana, Cuba, Which Resulted in the Disappearance of Yellow Fever from that Locality. W. C. Gorgas.
86 Cholelithiasis. J. Ford Thompson.
87 Case of Amyloid Liver and Spleen in Ulcerated Pulmonary Tuberculosis. D. S. Lamb.
88 The Normal Age of Man. T. A. R. Keech.
89 Two Cases of Pachymeningitis Hemorrhagica Interna. D. S. Lamb.
90 The Need of a Hospital and Better Facilities in Washington for the Treatment of Nervous Diseases. I. S. Stone.
91 A Case of Excision of the Cecum for Sarcoma in a Woman Who Had Had Symptoms of Appendicitis. I. S. Stone.
92 Case of Endothelial Sarcoma of Urinary Bladder. D. S. Lamb.
93 *Drugs and Their Adulterations and the Laws Relating Thereto. H. W. Wiley.
94 Some Studies in Connection with the Virulence of Tubercle Bacilli. E. A. de Schweinitz.
95 Human and Animal Tuberculosis. D. E. Salmon.
96 Case of Hernia; Gangrenous Intestine; Operation. George T. Vaughan.
97 Case of Cancer of Pylorus; Operation. George T. Vaughan.
98 Case of Intestinal Obstruction. A. A. Snyder.

83. **Tetanus.**—Thompson reports 3 cases, all cured by chloral and bromid treatment, and in 2 supplemented by carbolis acid injections according to the Bacelli method.

93. **Drugs and Their Adulteration.**—Wiley's article is a very interesting, but rather a long one, showing how drug adulteration is often done, its saving of expense and the amount of swindling of the public which is carried on in this way. He mentions especially the substitution of acetanilid, which is worth about 2 cents per ounce, for phenacetin, which is retailed for about $3.20, making a profit something like 160 times the original value; the use of wood alcohol in extracts, etc. He notices the results of state board examinations, and the practice of the courts in regard to the question. He thinks that good national and state laws properly formulated would not require numerous annoying persecutions because the reputable dealer would be likely to readily fall in with the law.

Texas Medical Journal, Austin.

August.

99 *Experiments to Determine the Disinfecting Value of the Morris Formaldehyd Generator. Allen J. Smith.
100 Tenotomy as a Preliminary Procedure for the Reduction and Cure of Talipes; Report of Eight Cases. J. S. Wooten.
101 Suggestions on the Preparations of the Lying-in Chamber. W. B. McLaughlin.

99. **Formaldehyd Disinfection.**—Smith's article is an experimental one with the Morris formaldehyd generator. A large proportion is taken up with tabulated statements of experiments. The room used for disinfecting experiments was not large and its absolute closure not possible, but from his trials it would seem that 1,000 c.c. of alcohol thus used are sufficient to effectually destroy the organisms in three hours' time in a room containing 850 cubic feet of air space or when the gas is generated in the proportion of 1.6 per cent. by volume or above. It would probably be best if the charge could be so arranged as to give approximately 2 per cent. per volume in rooms having more apertures. Under the conditions used in these experiments the gas generator is efficient in the destruction of the *Streptococcus pyogenes*, the *Bacillus typhosus*, the *Bact. anthracis*, the *Mycob. diphtheriæ* in from three to six hours of exposure. Its efficacy was evidenced by its distinct destruction of the sporulating anthrax. There are, however, some organisms that are resistant, as shown by the type of the *Bacillus subtilis* producing contamination, but this is not remarkable as special forms of this organism have been found to resist streaming steam for sixteen hours.

The Laryngoscope, St. Louis.

August.

102 *An Unusual Case of Spontaneous, Bilateral Hemorrhage from the Ear. M. A. Goldstein.
103 *Localized Hemorrhage into the Tympanum, with Intact Membrana Tympani. Seymour Oppenheimer.
104 Exploratory Puncture of the Drum Membrane in Certain Diseases of the Middle Ear. Dunbar Roy.
105 A Case of Lipoma of the Tonsil. Clement F. Theisen.
106 *Facial Neuralgia, Six Cases, Due to Diseases in the Nose and Antrum, with Comments. A Case of Immediate Tracheotomy for Foreign Body. W. Peyre-Porcher.
107 Notes on Cases of Sarcoma of the Nose, with Presentation of Pathologic Specimens and Micrographs. J. Price-Brown.
108 A Case of Empyema of the Frontal Sinus with Complications. T. W. Moore.

102. **Bilateral Aural Hemorrhage.**—Goldstein reports a case at length which had been thoroughly studied by other physicians as well as himself. He excludes by the history the charge of malingering, though that diagnosis had been made by leading authorities. He considers it largely a hysterical condition. The source of bleeding he could never absolutely ascertain, though he located it as nearly as possible in the angle formed by the posterior wall of the auditory canal in the plane of the membrana tympani. While he has seen it appear all at once he was not able to locate the bleeding point. The case seemed to be cured by radical suggestive therapy. The patient was anesthetized, the auditory canal dried out and the entire head put in a plaster-of-paris bandage. The patient was kept in the recumbent position and watched for forty-eight hours. A stiff crinoline bandage was then applied for forty-eight hours and renewed daily for one week. At the end of that time the dressings were removed and the patient announced cured and there has been no recurrence. He thinks the case is without a parallel in otologic literature. He reproduces all the other cases of bilateral hemorrhage of the auditory canal that he has found in the literature.

103. **Hemorrhage into the Tympanum.**—Oppenheimer reports cases showing this phenomenon and illustrating the tolerance of the tympanic cavity to large amounts of blood. While trauma is perhaps the most frequent cause, it may follow other diseases, as in the cases reported by Hektoen, Kümmel and others. The symptoms are impairment of hearing and tinnitus. Vertigo is absent as a rule. There may also be a history of otitis media as in the so-called hemorrhagic otitis media described by McBride.

106. **Facial Neuralgia.**—Peyre-Porcher holds that the most frequent cause of severe facial neuralgia is localized inflammation in the nose, antrum or teeth. In the last 6 cases treated by him the chief and only cause of the trouble was found in these organs. In 2 of the cases which he reports there had been removal of the gasserian ganglion without effect, and the nasal conditions had been entirely overlooked.

Therapeutic Gazette, Detroit.

August 15.

109 *The Results of the Treatment of 408 Cases of Typhoid Fever, with a Report of Experiments with a New Method. H. G. McCormick.
110 *Change of Climate in the Treatment of Phthisis. H. S. Bissey.
111 *The Silver Antiseptics. V. Coblentz.
112 Effects of Gases and Powder Smoke on Coal Miners' Eyes, and the Treatment to Be Used. G. R. Gilbert.
113 A Case of Priapism of Spinal Origin. H. D. Stitchter.
114 Instructions to Students Administering Ether. George Morton.
115 Cesarean Section Versus Abortion or Miscarriage in Women with Deformed Pelves. M. H. Bishop.

109. **Typhoid Fever.**—McCormick reviews his 22 fatal cases and details his treatment in the successful ones. His plan is to keep the bowels open first with calomel and then with saline, licorice powder or other laxative, using also camphor as an arterial stimulant in some cases, with the local application of guaiacol for the reduction of temperature both by topical applications and hypodermically, and in some cases preceding it with a hypodermic injection of 1/100 gr. of nitroglycerin. For hemorrhage he objects to the use of opium and relies on strychnin to support the circulation with hypodermoclysis of saline solution. He prescribes an easily digestible diet of animal broths, buttermilk, etc., not relying on any one thing. A careful examination of the stools is the guide for the diet. For an intestinal antiseptic he employs acid sulphate of soda and gives his results, also detailing extensive experiments on guinea-pigs and *in vitro*. He employed this drug in 4 cases and concludes from his observations:

> That the acid sulphate of soda is germicidal to typhoid bacilli in a solution of 1 to 300. 2. That it does not have a toxic effect when used hypodermically on guinea-pigs in a solution of 1 per cent. 3. That it increases leucocytosis and, in this way, helps nature to combat the disease. 4. That it neutralizes typhotoxin, and must, in a measure, lessen the delirium, fever, diarrhea and mental stupor, and modify various other symptoms attributed to this poison. 5. That it prevents, to a great degree, the congestion of Peyer's patches and the other lymph follicles of the intestines. 6. By so doing it prevents, to some extent, hemorrhage and perforation. 7. That it will resist the bacilli or toxin in any portion of the body. 8. That it will greatly lessen the complications of the disease. 9. That it is a prophylactic, as it can be taken by mouth in large quantities in an antiseptic strength, and as it will not be neutralized in the stomach, although the susceptible typhoid stomach is one of subacidity. 10. That this acid sulphate of soda will replace physiologically the deficient hydrochloric acid. 11. That it furnishes an abortive treatment, since if it lessens the intestinal involvement it would necessarily shorten the disease. 12. It may be used to purify contaminated drinking water by allowing the solution to stand from twelve to fifteen minutes before being taken.

110. **Climate in Phthisis.**—Bissey's article chiefly treats of the climate of New Mexican resorts, the advantages of which he points out.

111. **Silver Antiseptics.**—Coblentz describes the various new silver preparations which have been brought forward as obviating the disadvantages of silver nitrate. Argentamine, (ethylene diamine silver nitrate) is less irritating than silver nitrate, though it still has this bad quality to some extent. Tachiol (silver fluorid) and silberol (silver sulphocarbonate) are mentioned as drugs in regard to which the literature is as yet too scanty to afford an opinion. Ichthargan is said to have an astringent as well as an antiseptic action, being a combination of silver nitrate and ichthyol sulphonic acid. Citrate and lactate of silver, which have been used by Credé in surgical practice both in solution and as dusting powders, are discussed. Care should be used in their application as they discolor the clothing. Argonin is a combination of silver, casein and alkali and argonin-L contains twice the strength in silver. Albargin is a combination of gelatose with silver nitrate; largin, a combination of para-nucleo-proteid with silver, containing 11.1 per cent. of the latter, a gray powder soluble in water; nargol, a combination of nucleinic acid and silver; argentol (silver oxychinolin sulphonate); collargol (argentum soluble Credé, or argentum colloidale), protargol and argyrol or silver vitellin. Nearly all of these are unstable preparations and require to be protected from the light. Their principal use has been in gonorrhea and eye troubles. The conclusions which he reaches are that the organic silver preparations represent a real addition to modern material medica. All of them are less irritating than the nitrate of silver, and therefore much better tolerated by the patient. The fact that they are not precipitated by albumin and chlorids enables them to penetrate more deeply into the tissues, and therefore promotes their germicidal activity. The percentage of silver is of much less importance than the special combination in which the silver exists.

Journal of the Michigan State Medical Society, Detroit.

September.

116 The Bougie-catheter. Schuyler C. Graves.
117 Railroad Injury to the Pelvis with Rupture of the Urethra. Ralph H. Spencer.
118 Ectopic Gestation, with Report of Cases. William F. Metcalf.
119 Differential Diagnosis of Typhoid Fever. W. A. Ferguson.
120 The Abuse of Inflation and Massage of the Middle Ear. Emil Amberg.
121 Some Observations on Deranged Metabolism, with Clinical Application. Samuel Bell.

Kansas City Medical Index-Lancet.

August.

122 Surgical Tuberculosis. L. P. McCuiston.
123 Prostatic Surgery. Benjamin M. Ricketts.
124 Address, Medical Association of the Indian Territory. Fred S. Clinton.
125 Medical Malingering and Intentional Fraud. John Punton.

Kansas City Medical Record.

August.

126 Dysentery. Edgar A. Dulin.
127 Pelvic Disorders in the Etiology of Neurasthenia. W. M. Reitzel.

Alabama Medical Journal, Birmingham.

August.

128 Transmissibility of Diseases of Animals to Animals of Other Species. George T. McWhorter.
129 Some Symptoms by Which Cardiac Disturbances May Be Detected Clinically, and the Necessity of Careful Diagnosis, Prognoses and Treatment. L. W. Johnston.
130 Hydrotherapy. Carl Fox.
131 Flat Foot. William T. Berry.
132 The Creosote Treatment of Lobar Pneumonia. M. N. Due.
133 Some Remarks Concerning Education and the Results of the Examination of Over Two Thousand Young College Women. D. L. Wilkinson.

Southern California Practitioner, Los Angeles.

August.

134 Nursing from a Legal Point of View. Henry W. O'Melveny.
135 Address to the Graduates of the Agnew Sanitarium, San Diego. Elbert Wing.
136 Crime; Its Prevention and Cure. Walter Lindley.

Pacific Medical Journal, San Francisco.

August.

137 Ovarian Proliferating Cystadenoma. Winslow Anderson.
138 Excision of the Superior Maxillary Under Medullary Narcosis. A. W. Morton.
139 *Remedial Faults in the Editorial Work of Medical Journals. T. D. Crothers.

139.—This article is practically the same as that abstracted in THE JOURNAL of August 1, ¶71, p. 338.

Carolina Medical Journal, Charlotte.

August.

140 Primary Tuberculosis of the Tonsils. Richard H. Johnston.
141 Treatment of Typhoid Fever. L. F. Griffith.

Old Dominion Journal, Richmond, Va.

August.

142 Medical Organization. J. Harris Pierpont.
143 The Use and Abuse of the Nitrites. A. B. Greiner.
144 Pathology and Symptoms of Constipation. Mark W. Peyser.
145 Gelatine Treatment in Aneurism. Ennion G. Williams.
146 The Exaltation of Animal Magnetism. William H. Taylor.

Journal of the Kansas Medical Society, Topeka.

August.

147 Hare Lip and Cleft Palate Complicated with Protrusion of Intermaxillary Bone. P. D. Hughes.
148 The Present Status of Alcoholics. E. Smith.
149 Deaf Mutism. H. E. Williamson.
150 Some Thoughts Concerning Treatment of Syphilis of the Eye. H. L. Alkire.

Vermont Medical Monthly, Burlington.

July 25.

151 Some Observations on Urinary Diagnosis. A. B. Bisbee.
152 Quinsy. William F. Waugh.
153 What Should Be the Requisite for Raising the Quarantine in Diphtheria? G. G. Marshall.

Medical Standard, New York.

August.

154 A Neurological Clinic. Daniel R. Brower.
155 The Responsibilities of the Medical College. Carl S. N. Hallberg.
156 The Uterine Segment of the Ureter. Byron Robinson.
157 Correct Breathing. James M. Brown.
158 The World Is Idea. Herman Gasser.

September.

159 Some Cases of Leg Ulcer. E. A. Fischkin.
160 Ulcers of the Leg. Henry G. Anthony.
161 The Proposed National Bureau of Medicines and Foods. George P. Engelhard.
162 The Antiseptic Treatment of Typhoid Fever. William F. Waugh.
163 The Hydriatic Management of Typhoid Fever. David Paulson.
164 The World Is Idea. (Concluded.) H. Gasser.

New York State Journal of Medicine, New York.

September.

165 Typhoid Fever. Philip M. Neary.
166 One Hundred Days of Typhoid Fever. Frank Kenyon.
167 Otitis Media Purulenta Followed by Mastoiditis as a Sequelæ of Typhoid in the Recent Epidemic of Ithaca. John S. Kirkendall.
168 Hints on the Hygiene and Dietetics of Infancy. H. F. Gilette.
169 A Case of Melancholia Agitans. W. E. Douglas.
170 *The Present Position of Gallstone Surgery. William W. Seymour.
171 Principles Involved in the Repair of Lacerations of the Pelvic Floor. James H. Burtenshaw.
172 *Unrecognized Toxic Insanities. T. D. Crothers.

170.—This article appeared in THE JOURNAL, April 18, 1903, p. 1052.

172.—Abstracted under ¶62 above.

Mississippi Medical Record, Vicksburg.

September.

173 Puerperal Eclampsia; Report of Recent Cases. M. O. Shivers.

Canadian Practitioner and Review, Toronto.

September.

174 Therapeutics of Arteriosclerosis. John L. Davison.
175 The Cardiac Aspect of Arteriosclerosis. T. W. G. McKay.
176 Eye Symptoms in Arteriosclerosis. J. Cameron Connell.
177 Cerebral Aspect of Arteriosclerosis. H. A. McCallum.
178 The Medical Expert as a Witness. W. R. Riddell.
179 The Significance of Albumin in Urine. John A. Amyot.
180 Some Cases of Antepartum Hemorrhage. K. C. McIlwraith.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

The Practitioner, London.

September.

1 *Is the Urban Hospital Treatment of External or Surgical Tuberculosis Justifiable? A. H. Tubby.
2 The Treatment of Gout in Carlsbad. (Continued.) B. London.
3 Amentia. Idiocy; Imbecility; Feeblemindedness. A. F. Tredgold.
4 Some Impressions of the Sanatorium Treatment by a Healthy Patient. P. Horton-Smith.
5 Headache. Guthrie Rankin.
6 *The Treatment of Paraplegia in Tuberculosis of the Spine. J. Jackson Clarke.
7 Recent Work in the Field of Anesthetics. J. Blumfield.
8 A Case, with Comments. A Case of Henoch's Purpura. John Orr.

1. **Surgical Tuberculosis.**—Tubby's article is a plea for the country hospital rather than treatment in city hospitals, on the ground that the air of cities is not good for the patients. He has taken the statistics of four municipal hospitals in London and one country hospital which he has been able to obtain, and finds that out of 218 cases treated in city hospitals only 68, or 31.2 per cent., were cured, while 58.6 per cent. were relieved. Relief is no cure in tuberculosis, and half cures are worse than none. Taking the statistics of one country hospital which he has obtained it does not, he says, have a fair chance, as many of its patients were sent down from London hospitals after treatment had been tried and failed. The operative work has not been specially successful there, and the total number of operations was 3. The results, however, showed 14 cures and 24 relieved out of 42 cases, and, therefore, while the stay in the hospital was much longer than in the city hospitals the proportion of cures was very much greater. The advantages of the country hospitals are the smaller number hospitals the proportion of cures was very much greater. The rural hospital, he thinks, should be devoted to but the one object, being conducted on definite principles. No limit should be made as to age; cases once admitted should stay until they are cured or clearly proven to be incurable and separate establishments should be provided for the latter.

6. **Tuberculosis of the Spine.**—Clarke reviews the recent work on this subject and gives reports of cases, personal and otherwise. From the experience derived he concludes that when paraplegia develops rapidly and involves the sensory as well as the motor functions operative interference is necessary, but in other cases rest in bed with some form of extension should be tried; this failing, a skiagraphic examination should be made and the choice then lies between laminectomy and lateral drainage. Removal of the transverse process alone, when guided by a skiagraph, will be sufficient to open a large abscess. He advises against curetting out the abscess cavity, as the cord may be exposed behind it. When there is a sharp angular deformity in the spine the cord will not be in danger of being bruised during the introduction of the tube, but when the spine is nearly straight the tube should be introduced in a forward direction. The daily injection of a small quantity of carbolic lotion may be made through the tube. The transverse processes on both sides of the spine may be removed in order to obtain thorough drainage. Clarke considers Keeley's operation too dangerous in ordinary hands. Menard's costo-transversectomy involves the risk of injury to the pleura. If the removal of a transverse process does not reveal an abscess, laminectomy may be proceeded with, either immediately or after an interval, and the presence of a lateral opening will produce an easy outlet for further suppuration and probably prevent extension of tubercular infiltration around the spine. He objects to weight extension as confining the patient to bed too closely. If bedsores threaten, a water bed should be used. He thinks that the frame of iron gas-piping of Bradfrod's, on which canvas is stretched and on which the patient can be carried is better than weight extension. Plaster-of-paris corsets and poroplastic supports are hot and heavy, but for temporary use molded troughs of plaster-of-paris or felt are useful.

Archives Gen. de Medecine, Paris.

Last indexed page 752.

9 (Vol. CXCII, No. 29.) Le pouls veineux périphérique dans l'insuffisance tricuspidienne. P. E. Launois and M. Loeper.
10 (No. 30.) Eosinophilie pleurale. Cyto-diagnostic et cyto-prognostic. F. Barjon and A. Cade.
11 (No. 31.) Synovitis of the Sheath of the Abductor Longus of the Thumb. G. Marion.—La synovite de la gaine du long abducteur du pouce.
12 L'excrétion chlorurique et ses rapports avec la marche des pleurésies. Ch. Achard and others.
13 (No. 32.) Insuffisance hépatique par paludisme. Délire maniaque par insuffisance hépatique suite de paludisme. Diabète par anhépatie. J. Carrive.
14 Variations de l'ureogénie sous l'influence de la glycosurie alimentaire provoquée. F. X. Gouraud.

Presse Medicale, Paris.

15 (No. 67.) *Le paludisme en Algérie. H. Gros.
16 *L'arthritisme et ses rapports avec le diabetes. Le diabète albuminoique. E. Fiquet.
17 (No. 68.) *Sur la présence de corps étrangers (substances cristallines et microbes) dans la cellule nerveuse. G. Marinesco.
18 *De la centrifugation employée comme moyen rapide pour apprécier la valeur nutritive du lait (of milk). Fabre.
19 *La voie vagino-périneale dans la cure des fistules recto-vaginales superieures. F. Legueu.

15. **Malaria in Algiers.**—Among the points mentioned by Gros in reviewing his experience are that intense heat seems to affect the mosquito as unfavorably as extreme cold or dry weather. This explains the variations in the number of mosquitoes in different years.

16. **Relations of Arthritism to Diabetes.**—Fiquet argues that the arthritic temperament predisposes to certain diseases, but is not an affection in itself, being merely insufficiency of intracellular oxidations. It manifests itself differently, according to the kind of oxidation which is defective. If oxidation of the carbohydrates is insufficient, then diabetes mellitus appears. The oxidases which normally aid in the combustion of sugar are defective or absent, but those which preside over the combustion of albumin and fats may be present in abnormal amounts to make up for their deficiency. If the defective oxidases are those which aid in combustion of fats, then obesity results, while if the missing oxidases are those which aid in combustion of albumin, then a variety of diabetes ensues for which he proposes the name "albuminoic diabetes." Treatment is similar to that for ordinary diabetes, only the albuminous substances and not the carbohydrates must be omitted from the dietary. Cases of this kind may be detected in the early stages and impending serious disease warded off by a

hydrocarbonate and vegetable diet, iron to favor oxidations, massage and hydrotherapy to promote cellular functions in general and the oxidations in particular, and rest in country surroundings. The diagnosis is based on examination of the urine. Determination of the "coefficient of oxidation," that is, the proportion of the ureic nitrogen to the total nitrogen, is important, but not enough alone for the diagnosis. This is established by determination of the alimentary substances which have escaped the action of the oxidases. The best technic for the purpose is by precipitation of these substances by phosphomolybdic acid, which is as valuable for these cases as Fehling's reaction for diabetes mellitus. He adds to 15 c.c. of urine 10 c.c. of fluid containing in 15 gm. of distilled water, 1 gm. of the acid in crystals, and 25 gm. of an 1.18 per cent. solution of hydrochloric acid. The precipitate can be weighed or merely measured in a graduated test tube.

17. **Foreign Bodies in Nerve Cells.**—Marinesco's article was reviewed on page 690. It is copiously illustrated here.

18. **Centrifugalization as Test of Milk.**—Fabre recommends the practice which has been long in use at his clinic to determine the nutritive value of breast milk. After the child has been nursing for two or three minutes 10 c.c. of the milk are drawn into a graduated tube and three drops of methylene blue are added, which does not stain the cream. It is centrifugalized for five minutes, and the amount of space occupied by the cream determines the nutritive value of the milk. He sometimes proceeds further to test the amount of albumin, lactose, etc. In pathologic conditions the information derived has proved of the greatest value for further care of the infant.

19. **Vagino-Perineal Approach to Recto-Vaginal Fistulas.**—Legueu gives cuts of the various steps of his method of obliterating a fistula in the upper part of the recto-vaginal septum. He detaches and incises the rear wall of the vagina up to and beyond the fistula. He then sutures the rectal wall, and later the vaginal wall separately. The site of the lesion is amply exposed, while the disadvantages of incising the perineum proper are avoided.

Semaine Medicale, Paris.

20 (No. 34.) *La neurofibrosarcomatose, variété particulière de sarcomatose primitive du système nerveux. Raymond.
21 La tachycardie orthostatique. J. Thomayer.

20. **Neurofibro-Sarcomatosis.**—Raymond has observed 2 cases of this affection, both in young subjects with tuberculous parentage. The symptoms developed suddenly without apparent cause, suggesting a brain tumor with its principal localization at the base of the brain. In some cases on record spinal symptoms were also observed, but not in his patients, and yet the spinal cord was the seat of multiple tumors in the case that came to autopsy. The main tumor is usually in the cerebello-protuberantial angle, of fibroplastic nature and adherent to the meninges. The nodules in the peripheral nerves usually escape discovery. Treatment can be only palliative owing to the multiplicity of the nodules. He believes that the condition may be regarded as a mesodermic tumor, a primary lesion of the connective tissue of the nervous system. The elements of ectodermic origin are not involved in the process.

Beitraege zur Klin. Chirurgie (v. Bruns'), Tuebingen.

Last indexed page 640.

22 (Esmarch Festschrift Concluded, XXXVII, No. 3.) Exostose bursata mit freien Gelenkkörpern (with free bodies). O. Riethhus.
23 Die aseptischen Operations-Räume der Zuricher Klinik und ihre Bedeutung für die klinische Unterricht. Krönlein.
24 Ueber ein mit Roentgen-Strahlen erfolgreich behandelten Fall von Carcinoma Mammæ. J. v. Mikulicz.
25 *Embolic Transportation of Projectiles. H. Schloffer.—Ueber embolische Verschleppung von Projektilen nebst Bemerkungen über Schussverletzungen des Herzens und der grossen Gefässe.
26 Procedures for Exposure of Posterior Temporal Bone and Cerebellum, with Reports of Cases. F. Krause.—Zur Freilegung der hinteren Felsenbeinfläche und des Kleinhirns.
27 *Treatment of Fissure and Prolapse of Rectum. V. Czerny.—Behandlung der Fissur und des Vorfalles des mastdarmes.
28 Resektion des 3 Ast des Trigeminus am Foramen ovale. O. Hildebrandt.
29 Extra-abdominal Treatment of Intra-abdominal Rupture of Bladder. Ibid.—Extra-abdominale Versorgung intra-abdominaler Blasenrisse.
30 *Surgical Experiences in Kidney Disease, with the Latest Methods of Investigation. H. Kümmel.—Chirurgische Behandlung Nierenkrankheiten unter Anwendung der neueren Untersuchungsmethoden.

25. **Embolic Transportation of Bullets in Heart or Large Vessels.**—Schloffer reports 2 cases of this kind. In one a bullet entering the heart was swept into the subclavian artery. The symptoms were pains in the arm and ischemic paralysis of the right forearm. In the second case a bullet entered the upper third of the femoral artery and was carried into the posterior tibialis posticus. The bullets were removed by an operation in each case. He has found 10 similar cases in the literature in which the bullet entered the circulatory system and remained at the spot or was swept along a certain distance. Experimental research also has confirmed the possibility of such an occurrence. The patients all died in this series. He has collected 23 cases of bullet wounds of the heart, and only 6 survived more than two months. In all of these the right ventricle had been the seat of the lesion.

27. **Treatment of Fissure and Prolapse of Rectum.**—Czerny describes a case of prolapse treated by operative intervention through a parasacral incision exposing the rectum and taking a lengthwise tuck in it with a row of button sutures. The stitches did not pass into the mucosa and the tuck projected toward the lumen of the intestine. The rectal wall was sutured at the same time with several catgut stitches to the severed fibers of the ligaments. By these procedures the wall of the rectum was made smaller and stiffer and it was suspended, thus completely counteracting the tendency to prolapse. He treats fissure by excision in profound anesthesia, uniting afterward the tip of the wound in the mucosa with the opposite point of the wound in the skin, drawing it out for the purpose by a suture passed through the mucosa at the tip of the incision. The rest of the wound is united with two to four stitches. The fissure is thus radically extirpated and the defect left is lined with sound mucosa. He has found the operation a success in his 6 cases treated in this way.

30. **Surgical Experiences in Kidney Disease with Functional Diagnostic Measures.**—Kümmel reviews his extensive experience at the general hospital at Hamburg, which includes 205 cases, with 228 operations. He states that kidney stones were diagnosed by the Roentgen rays in 18 cases, and in 16 they were found at the operation and in 2 at the necropsy, thus confirming the radioscopy in every instance. He regards silk catheters for the ureters as a great improvement, as they can be boiled freely. He boils them in a saturated solution of ammonium sulphate and keeps them in a dry glass cylinder. The information to be derived from cryoscopy is reviewed. His record includes 95 nephrectomies, with a mortality of 16.8 per cent., and he proclaims that since the new functional diagnostic measures have been introduced it has been reduced to 6.4 per cent. The article fills nearly 200 pages and is profusely illustrated. His total mortality was 31, and 174 of the patients were cured. He removed the kidney in 30 out of 35 cases of tuberculosis of the organ, with nephrotomy in 5, and reports 28 recoveries in this group.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

31 (No. 34.) *Biochemistry of Pregnancy. E. Opitz (Olshausen's clinic, Berlin).—Zur Biochemie der Schwangerschaft.
32 *Alkalinity of Blood. W. Orlowsky.—Zur Frage der Alkalescenz des Blutes.
33 *Case of General Thrush Infection. O. Heubner.—Fall von Soor-Allgemeininfektion. (Commenced in No. 33.)
34 *Treatment of Skin Affections with Roentgen Rays and Concentrated Light. W. Scholtz (Königsberg). (Commenced in No. 33.)
35 Ueber die Verwendung des Adrenalins in der Gynäkologie. H. Cramer.
36 Historical Sketch of Medical Faculty at Münster. G. Sticker. Zur Vorgeschichte der med. Fakultat in Münster i. W.
37 (No. 35.) *Zur antitoxischen Tetanus-Therapie. E. v. Behring.
38 *Congenital Malignant Growths. E. Joseph.—Ueber angeb. bösartige Neubildungen.
39 Hydrops intermittens. Heilung durch Iodoform-Glycerin-Injektion. Wiesinger.
40 *Ueber mechanische Behandlung der Blepharoptosis. G. Abelsdorff.
41 *New Method of Quantitative Determination of Sugar in Urine. E. C. Behrendt (Berlin).—Neue Methode quant. Bestimmung von Zucker im Harn.

42 Alleged **Substitutes for Quinin. Mühlens.**—Ueber angebliche Ersatzmittel für Chinin bei der Malaria-Behandlung.

31. Bio-**Chemistry of Pregnancy.**—Opitz describes experiments with what he calls a "syncytiolytic serum" derived from rabbits, goats, a heifer and a horse, previously injected with tissue from human placentæ freed from blood. The results of the tests were negative in regard to Veit's assumption in regard to syncytiolysis, but, on the other hand, the serum displayed an antitoxic power against the assumed syncytiotoxins which Opitz assumes to be circulating in the blood in eclampsia and to bear a causal relation to it. As soon as the maternal blood penetrates into the trophoblast, cells from the periphery of the ovum drop off into the maternal blood and are swept into various organs. These deported cells perish sooner or later under the action of cytolysins formed in the blood, and the products of their disintegration have a toxic action as foreign bodies. A substance is then produced to neutralize these toxic substances, an anti-syncytio-toxin. This process can be copied in animals by injection of placental tissue, and their serum then acquires the properties of an anti-syncytiotoxin. Opitz has applied this new serum in the treatment of several cases of eclampsia in Olshausen's service, and the results have encouraged the preparation of the serum on a larger scale, and it will soon be put on the market. He does not give any details of the effects on eclamptic subjects further than that it proved absolutely harmless, reserving the particulars for a later communication.

32. **Alkalinity of Blood.**—Orlowsky examined 63 patients with various affections to study the alkalinity of the blood in different morbid conditions. He found that in health it ranged from 240 to 267 mg. NaOH in 100 c.c. of blood with the litmus test, and that in various diseases the alkalinity is proportional to the number of red corpuscles, declining when there are few reds and increasing with them. Artificially increasing the alkalinity of the blood by internal administration of an alkali or by a tepid alkaline enema, has only transient effect. The action of the latter is more pronounced than that of the former.

33. **Generalized Infection with Thrush.**—Heubner's patient was a child of sixteen months, brought to the clinic with symptoms of a diphtheroid affection, suggesting the presumptive diagnosis of generalized infection with thrush. It was confirmed by the postmortem findings. The child died in less than a month after the first symptoms had been noticed. Injection of animals reproduced the syndrome and the anatomic changes. In both the little patient and the animals there was the same period of incubation, the high septic fever, the extreme acceleration of pulse and severe dyspnea without lung findings, with retention of consciousness and the rapidly fatal course. The lungs were the only organs free from the overgrowth of the fungi. The invasion could be traced from the necrotic tonsils into the lymph capillaries and thence into the general circulation. Without close attention and study of the case it would have been erroneously diagnosed and labeled diphtheria.

34. **Radio-Therapy of Cutaneous Affections.**—Scholtz reports his experience with different combinations of salves, *x*-rays, the iron lamp and the curette in skin affections, lupus in particular. By varying the combination he found it possible to obtain excellent effects.

37. **Antitoxin Treatment of Tetanus.**—Behring affirms that the day, even the hour, the minute, when the antitoxin can be applied, is of the greatest moment. He urges that it should be accessible at all times, as only by this means can a correct judgment as to its efficacy be formulated. A blank circular is given now with each vial, which the physician is requested to fill out with the details of the case and return.

38. **Congenital Malignant Growths.**—Joseph publishes from Czerny's clinic a case of a mixed tumor removed with the left kidney from a weakly child sixteen months old. Several varieties of tissue were found in the tumor which had evidently developed from the Wolffian body, including pure sarcomatous granulations. The infant has grown since into a remarkably healthy child, with no indications of recurrence of the malignant neoplasm. It was peculiarly interesting from the fact that the tumor formed a movable thrombus in the renal vein. It was the size of a fist, and weighed 600 gm. He reports also a second case, an embryonal tumor in the abdominal wall, in malignant degeneration, removed from an infant five months old, with no recurrence to date. The mothers were healthy in both these cases. The fetus can thus become affected with malignant disease, although apparently protected from the causes to which we are inclined to ascribe its etiology, and it can develop without affecting the maternal organism.

40. **Mechanical Treatment of Blepharoptosis.**—Abelsdorff had a spring applied on the inner side of the glasses the patient was in the habit of wearing, starting from the nose-piece. When putting on the glasses the latter lifted the drooping eyelid on the spring and thus mechanically corrected the deformity. No trace of the spring can be seen in the cuts showing the glasses in place.

41. **Quantitative Determination of Sugar in Urine.**—Behrendt points out that the Fehling reaction is unreliable in case of the presence of organic combinations of iron in the urine. He has been seeking to remedy this and describes a technic which is simple and sufficiently accurate. He uses an alkaline solution of bismuth nitrate which differs from Nylander's reagent in that only one-tenth of the amount of the nitrate is used. He weighs out 32.747 gm. of the sediment after dissolving the nitrate in distilled water. Then 500 c.c. of double normal soda solution is poured over it and the precipitate dissolved in 50 gm. Seignette salt (potassium sodium tartrate), and distilled water added to make a liter. He adds 10 c.c. of this fluid to 10 c.c. of the urine in an Esbach tube, and heats in the water-bath for half an hour. It is then set aside for fifteen to twenty minutes. The amount of the precipitate (bismuth oxydul) is the index of the sugar, as 1 c.c. corresponds to 1.4 per cent. sugar.

Mitteilungen a. d. Grenzgebieten, Jena.

Last indexed page 75½.

43 (XI, No. 5.) *Ueber Struma mit Knochen-Metastasen (metastasis in bones). K. S. de Graag.
44 *Lymphatics of Esophagus and Vicinity. K. Sakata.—Ueber die Lymphgefässe des Esophagus und über seine regionären Lymphdrüsen mit Berücksichtigung der Verbreitung des Carzinoms.
45 *Tuberculosis herniosa. R. Lewisohn (Frankfurt a. M.).
46 *Hyperalgesia After Bullet Wounds in Head. Wilms (Leipsic).—Hyperalgetische Zonen bei Kopfschüssen.
47 *Ueber Spondylitis infectiosa. H. Quincke (Kell).
48 *Chronic Inflammation of Spine. R. H. Focken (Heidelberg).—Ueber chronische ankylosierende Entzündung der Wirbelsäule.

43. **Struma with Metastasis in Bones.**—De Graag found metastases in the lungs and in the tenth and eleventh thoracic vertebræ in case of an adeno-carcinoma in the thyroid gland. The metastases, however, under the microscope resembled more the structure of the original thyroid gland than the structure of the neoplasm.

44. **Lymphatics of Esophagus Region.**—Injection of the cadavers of children by Gerota's method showed that the lymphatics of this region originate in two separate sets, with no direct communication between them. The first set is arranged lengthwise in the lower layer of the mucosa, while the second is not so large nor so regular, and forms a network on the surface of the perimysium. The lymphatics communicate directly with those of the pharynx above and those of the stomach below, although the intervening vessels may run a long way in the submucous tissue or against the wall before reaching them. The close clustering of glands around the recurrent nerve explains the paralysis of this nerve frequently observed in cases of carcinoma of the esophagus. He noted it in 18 out of 236 cases, and in 13 it was unilateral. The glands may, therefore, be grouped as the near and the distant. The latter are represented by the deep, lower cervical glands, found in the angle formed by the subclavian and internal jugular veins.

45. **Tuberculosis of Hernial Sac.**—About 58 cases of this condition have been published and Lewisohn has observed 4 more.

The affection may occur with or without effusion and with or without nodules. The diagnosis is difficult in the absence of evident tuberculosis elsewhere, but is suggested by an existing tubercular peritonitis, reducible, fluid contents of the sac, large nodules on the floor of the sac and smaller nodules leading toward the inguinal canal. The hernia may increase rapidly in size or may become tender. Operative treatment is urgently indicated, with extensive resection of the sac. The prognosis after operation is good; in some cases it was followed by the healing of an existing tubercular peritonitis.

46. **Hyperalgesia with Bullet Wounds of Head.**—Wilms noticed transient zones of hyperalgesia in the neck and back of the head in 4 cases of bullet wounds of the head. The zones did not correspond to peripheral nerves but to the cervical segments, and may be explained by assuming injury of the sympathetic at the sinus cavernosus. In one case the bullet was found at this point, and in 2 others it might have lodged there temporarily.

47. **Spondylitis Infectiosa.**—Quincke has observed a case of spondylitis consecutive to typical pneumonia, another consecutive to a streptococcus pleuritis and one after typhoid. He thinks that the bone marrow of the spine is affected in case of infections the same as the spleen, but that the abundance of blood in these organs renders them more resistant generally than the marrow of the long bones. This assumption of the involvement of the spine in severe infectious diseases explains many hitherto puzzling symptoms during convalescence. It also renders urgent the protection of the spine against trauma and over-exertion at this time.

48. **Spondylitis Deformans.**—Focken does not believe that a close distinction can be drawn between the Bechterew and the Marie-Strümpell types of chronic spondylitis with a tendency to ankylosis. Both in etiology, symptoms and the pathologic anatomy there is close resemblance between them. He thinks it probable that the same injurious agent which affects the ligaments acts also on the nervous system.

Wiener Klin. Rundschau, Vienna.

Last indexed page 757.

49 (XVII, N. 29.) *Certain Nervous Skin Affections and Their Treatment. Max Joseph (Berlin).—Ueber einige nervöse Hauterkrankungen und deren Behandlung.
50 (No. 30.) *Application of Bone Fillings to Osteomyelitis. N. Damianos.—Die v. Mosetig'sche Iodoform-Knochenplombe und ihre Anwendung bei Osteomyelitis. (Commenced in No. 27.)
51 (No. 32.) *Diseases and Accidents of Woodworkers. K. Steiner.—Holzarbeiterkrankheiten und Unfälle. (Commenced in No. 29.)
52 (No. 33.) *Nephritis in Early Stages of Syphilis and Its Treatment. E. Schlechtendahl (Barmen).—Ueber Nierenentzündung im Frühstadium der Syphilis und deren Behandlung.
53 *Difficulty of Determining Anatomic Changes from the Clinical Manifestations in Appendicitis, and Technic of Operating. Carl Beck (New York).—Ueber die Schwierigkeit, das Verhältnis der anat. Veränderungen zu den klin. Erscheinungen bei der Entzündung des Wurmfortsatzes zu würdigen, und über die Operationstechnik. (Commenced in No. 31.)

49. **Treatment of Nervous Cutaneous Affections.**—Joseph calls attention to the diagnostic value of the secondary lesions that develop after scratching an itching affection. In scabies and prurigo an eczematous process develops secondarily to scratching, but in lichen, after scratching, nothing but a recrudescence or new eruption of the lichen nodules is seen. Consequently in dubious cases the discovery of an eczematous lesion decides against lichen. The absence of eczema is also notable in pruritus, although in certain cases of circumscribed pruritus a lichenification of the scratched patches may be noticed, to which the name simple chronic lichen has been given. These lesions do not heal like lichen planus with little if any tendency to recurrence, but recur again and again and always at the same spot or spreading from these points. In the treatment of pruritus he has found nothing so effective as bromocol, a combination of dibromin and tannin, which he was the first to introduce into dermatology. Time has confirmed its value, especially of the mixture with glycerin, zinc oxid and starch, which dries at once into a varnish, rendering further dressing unnecessary. He recommends this as a very valuable remedy for pruritus of various origins, also for strophulus infantum and urticaria due to autointoxication. Bromocol plaster has proved a particularly convenient method of applying the bromocol in certain nervous affections.

50. **Treatment of Osteomyelitis with Iodoform Filling.**—Damianos illustrates a number of specimens and cases to support his assertions that chronic osteomyelitis is essentially an affection of the spongiosa, which fact has been overlooked heretofore in treatment. In reality, the irregularly distributed foci of granulation are the principal cause of the development and persistence of chronic myelitis. The spongiosa should be removed far into sound tissue, and this has been rendered possible by Mosetig's filling. He exposes the bone with a semi-circular incision and turns back the flap of soft parts, which includes the periosteum. He then removes the tissues affected, far into sound tissue, and fills the cavity left with the iodoform mixture described in THE JOURNAL, xl, p. 1,544, ¶75. Damianos gives radiograms of a number of patients thus treated with complete success, the limb functioning perfectly, free from pain and any tendency to recurrence of the bone affection.

51. **Diseases and Accidents of Wood-Workers.**—Steiner's practice in Herzegovina and Bosnia brings him in contact with men working in saw-mills and lumber camps, and his article is a comprehensive study of the subject, especially from the standpoint of industrial insurance. He notes that the largest number of accidents occur on Monday, and that the proportion of accidents is very much higher when the hours of work are long than when they are short, fatigue evidently rendering the men less cautious.

52. **Nephritis in Early Stages of Syphilis.**—Syphilitic infection may induce acute nephritis in hitherto sound kidneys, but it yields speedily to mercurial treatment. The effect at first seems to be an aggravation, as the kidney casts off the cells that have been injured by the syphilitic process, but when these have been expelled, the nephritis will be seen to have been cured by the specific treatment.

53. **Appendicitis.**—Carl Beck gives 12 cuts of interesting specimens and cases from his experience in America, and says a good word for the term "appendicitis" as descriptive and apt. The condition is not a typhlitis nor a perityphlitis nor a paratyphlitis, and these terms should not be applied to it. The Germans should use either the word "appendicitis" or their home term "Wurmfortsatzentzündung," which is etymologically correct if not very melodious. He also describes his operative technic with which Americans are familiar.

Zeitschrift f. Orthop. Chirurgie, Stuttgart.

Last indexed XL, page 746.

54 (XI, 3.) *Die habituelle Luxation der Patella. P. Bade.
55 *Value of Mikulicz's Plastics of Foot. J. Wietung.—Zur Verwerthbarkeit der Mikulicz'schen Fussplastik.
56 Forcible Reduction of Deformities of Foot. K. Vogel (Bonn).—Einige neue Apparate zur gewaltsamen Redression von Fussdifformitäten. (Pes varus, planus and excavatus.)
57 *Fracture of Neck of Femur in Young Subjects. A. Hoffa.—Ueber Schenkelhalsbrüche im kindlichen und jugendlichen Alter.
58 Correction of Curvature of Spine. P. J. v. Modlinsky (Moscow).—Zur Correctur der Rückgratsverkrümmungen.
59 Reply to Bade's Article on Scoliosis in No. 1 A. Roth (Budapest).
60 (No. 4.) *Zur chronischen Arthritis des Kindes (of children). H. Spitzy (Pfaundler's clinic, Graz).
61 Zur Ehren-Rettung des Hessing-Corsets. K. Hasebroek.
62 Beitrag zur Thier-Skoliose (in animals). Ottendorf (Vulpius' Institute, Heidelberg.)

54. **Habitual Luxation of Patella.**—The luxation was of traumatic origin in 3 of the 4 cases in Bade's experience. The other was a young girl with abnormally lax joints. In all the cases of habitual luxation the patella is unusually movable and the musculature relaxed. Treatment should be essentially the wearing of a splint which allows only extension and flexion of the knee. Direct fixation of the patella is seldom necessary, and a knee-cap is usually superfluous. Operation should not be attempted unless the gait is interfered with to an extent that disturbs the working capacity and depresses the patient. If surgical intervention is decided on it should

be thorough, some osteoplastic operation combined with shortening the capsule or osteotomy as indicated.

55. **Mikulicz's Plastic Operation on the Foot.**—Wieting shows by radiograms and description of several cases the gratifying results obtained by this method of operating on deformed feet without mutilating them. It is astonishing, he adds, how quickly the circulation becomes re-established in the remodeled foot through the narrow bridge left. The dorsal flexors are the only muscles left, but they impart elasticity to the foot. He thinks that the principle of the operation should be extended to other interventions.

57. **Fracture of Neck of Femur in Young Subjects.**—Hoffa remarks that since the introduction of radiography we have learned that fracture of the neck of the femur occurs more frequently in young subjects than the profession had hitherto imagined. No cases in children had been observed in the 75 fractures of the neck treated at König's clinic, and only 3 in the second decade, as reported a few years ago, but since then Hoffa has found 78 cases on record and 10 have been observed in his practice. In 1899 Gerstle was able to collect 53 cases of traumatic detachment of the epiphysis. In the total of 84 cases of injury of this part of the femur in which the age was mentioned, 17 of the subjects were under 5; 18 between 6 to 12; 34 from 13 to 16, and 15 from 17 to 20. Hoffa gives the details of his own and of some of the other cases. The symptoms at first of fracture of the neck or detachment of the epiphysis are slight. There is sharp transient pain, but the subjects are usually able to walk notwithstanding the injury. They are not confined to their bed long and the disturbances from the trauma are not apparent until after an interval of weeks or months. Very few are correctly diagnosed from the start; the injury is treated as a mere contusion and later as a coxitis, or, after healing, as a coxa vara statica. The absence of muscular atrophy and of reflex muscle spasms speaks against coxitis and also the sudden onset, and radioscopy will locate the lesion. The prognosis to date has not been good as to function. The epiphysis is apt to lose its slant and heal in a more or less vertical position, which changes also the direction of the neck as it develops further. Immobilization should be applied with a plaster cast if the fracture is seen early, and even after due consolidation of the fragments the patients should not be allowed to use the limb freely for a year at least, but should wear an appliance to relieve the thigh of the weight of the body, with massage and exercises to strengthen the muscles. When seen late, if massage and gymnastics and a supporting apparatus do not relieve, an operation is necessary, either resection or subtrochanteric oblique osteotomy.

60. **Chronic Arthritis in Children.**—Spitzy describes in detail the clinical history of 17 cases and the results of treatment, with numerous illustrations. He found systematic massage extremely useful, even in some cases rebellious to all other measures, especially when combined with active hyperemia. Immobilization was necessary in most cases at first, but he warns against its too prolonged use. The pernicious form of nodular rheumatism has always proved intractable. Not a single case of recovery is on record, but if a bacteriologic etiology can be determined serum treatment may supply the needed weapon.

Gazzetta degli Ospedali, Milan.

63 (No. 65.) *Di alcune basi scientifiche del valor curativo dell' alcool. S. Mircoli.
64 La diagnosi di rene mobile (movable kidney). G. Corsini.
65 Risultati clinici sopra l'uso di un catgut preparato in un modo estremamente semplice. C. Mariani. (Claudius' method.)
66 Laringo-spasmo e pseudo-meningite da ascaridi lombricoidi. G. Pierantoni.
67 (No. 67.) *Significato immunizzante della auto-emolisi da alcool. S. Mircoli and A. Gervino.
68 (No. 68.) *Ricerche clinico-sperimentali sulla para-ganglina Vassale nell' atonia gastro-intestinale. U. Baccarani and A. Plessi.
69 *Agglutinating and Antitoxic Properties of Horse Serum. T. Caffarena.—Sul potere agglutinante ed antitossico del siero di cavallo normale e di immunizzato contro la tubercolosi.
70 New Instrument for Endo-urethral Injections. G. Franceschini (Vicenza).—Un nuovo strumento per le iniezioni endo-uretrali nella blenorragia.
71 (No. 71.) *Graphic Tracings of Kidney Function. S. Mircoli.—Fasi del lavoro renale, grafica e latenze di lesioni renali.
72 *Ricerche sperimentali sull' uso di una antitossina tubercolare per via gastrica. F. Figari.
73 *Lime as Hemostatic. T. Silvestri.—Sull' uso del calcio come emostatico.

63. **Alcohol in Therapeutics.**—Mircoli has previously proclaimed that the blood serum of persons accustomed to the use of alcohol—but not to a pathologic extent—possessed the power of neutralizing the action of tuberculin. He is convinced that alcohol confers an increased resisting power in respect to tuberculous infection. Experiments on rabbits under the influence of alcohol showed that they displayed a much more vigorous local reaction to inoculation of tubercle bacilli than the controls, and frequently the local lesion healed without general infection. Other experiments with rabbits given a large amount of alcohol at once produced results exactly opposite to those induced by the same amount in fractional doses over a long period. He also found that rabbits under the influence of a large dose of alcohol required twice the usual amount of tetanus toxin to induce symptoms. One of the rabbits after a large dose of alcohol showed pronounced autohemolysis and hemoglobinemia, urobilinuria and hemoglobinuria, additional testimony in regard to the action of alcohol on the composition of the blood.

67. **Significance of Auto-Hemolysis from Alcohol.**—Mircoli further states that the serum from healthy men accustomed to drink two or three quarts of wine a day proved bactericidal *in vitro* for cultures of the typhoid bacillus. Other experiences have demonstrated that besides this direct bactericidal action, the alcohol also stimulates the organism to elaborate greater quantities of more powerful alexins, thus aiding in repelling bacterial invasion. He suggests that it may be dangerous to deprive patients of their daily modicum of alcohol in case of an infectious disease affecting a person accustomed to its use. The production of alexins under the influence of alcohol is transient and ceases on its suspension. He thinks that his research has confirmed the fact that alcohol confers antitoxic, bacteriolytic and bactericidal properties on the serum, and enhanced resisting powers on the tissues. This does not occur directly, but by the participation of the organism thus temporarily stimulated by the alcohol.

68. **"Paraganglina" in Atony of Stomach or Intestines.**—This name has been applied to an extract of the medullary substance of the suprarenal capsule of beef cattle. It is not affected by the gastric juice, and is well tolerated by the stomach, while it has a decidedly favorable action on the motor function of the digestive tract administered by the mouth or rectum. The relief and improvement were so prompt and so remarkable in many cases of gastrointestinal atony and general asthenia, that Baccarani believes the symptoms must have been primarily caused by insufficiency of the suprarenals. The extract does not seem to have any cumulative action, but has a tendency to raise the blood pressure, increase the frequency of the pulse, the amount of urine, and the elimination of nitrogen and phosphoric acid in the urine, while the nitrogen in the feces is diminished.

69. **Agglutination with Horse Serum.**—Normal horse serum has no agglutinating or antitoxic properties, Caffarena reiterates, but acquires them by the addition of minute amounts of antituberculosis serum. Serum from horses immunized against tuberculosis has marked agglutinating power, up to 1/400.

71. **Graphic Tracings of Kidney Function.**—Mircoli points out a source of error in the findings of the methylene blue functional test of the kidneys. This is the "bioscopic" power of the serum, which varies in different conditions. Certain toxins also have an effect on the color of the stain, and the liver may influence its elimination. The findings are also unreliable in incipient or well-compensated kidney lesions, as the sound part may substitute the defective part. He also doubts the reliability of the phloridzin test, as injection of phloridzin increases the proportion of sugar in the blood even after extirpation of the kidneys. In other tests phloridzin was artificially circulated through one kidney, but no sugar was de-

tected in the ureter on this side, while it existed in the other ureter. He refers to recent experiences which suggest that the variations in the freezing-point are not absolute indices of the morbid conditions as some believe. The freezing-point remained the same before and after an uremic crisis in a case of glomerular nephritis consecutive to scarlet fever. The findings are liable to be influenced by ingestion of water, by change of diet and by the capacity of the tissues for absorption and retention. He has been conducting research along different lines, and believes that valuable information may be obtained by studying the spontaneous urine at different periods during the twenty-four hours, recording the frequency of micturition and the quantity of the urine, with its specific gravity at various hours, showing the relations between the secretion of water and of the solid elements dissolved in it. By the two curves thus obtained an insight into the actual work done by the kidneys is afforded. It can be expressed by the formula: Work equals the specific gravity multiplied by the number of cubic centimeters to the hour. The two lines representing the elimination of water and of solid materials parallel each other in health, and diverge or cross in parenchymatous nephritis. In the interstitial there is more or less irregularity, but the tendency is more towards a parallel. These graphic tracings may reveal disease, still latent, that escapes other tests.

72. **Experimental Administration of Antituberculosis Serum by the Stomach Route.**—Figari reports experiences with desiccated specific serum administered to guinea-pigs and to one patient in the clinic. The results established beyond question, he thinks, that it is possible to obtain effective curative results with specific serum treatment by the mouth the same as by subcutaneous injection. The serum of the animals acquired marked agglutinating property, and in the patient it rose from 1/10 to 1/50. His results corroborate those obtained by Roncagliolo with tuberculosis antitoxin administered by the mouth in his clinic.

73. **Lime as a Hemostatic.**—Silvestri's tests on dogs confirm the fact that lime has a coagulating effect on the blood and may prove effective in arresting hemorrhage. He administered it by the mouth to a patient with a tendency to hemophilia and found that after taking fractional doses of calcium hypophosphite for seven days the blood which at first did not coagulate for twelve hours, clotted abundantly in less than nine. He took at first 7 and then 4 gm. a day.

Bolletino d. Ostetricia e Ginecologia, Florence.

Last indexed XXXIX, page 811.

74 (II, No. 1.) 3 casi di eclampsia puerperale curati col veratrum viride. Pinzani.
75 Urine in Pregnancy. Boni.—Alcune ricerche chimiche sopra le orine delle gravide.
77 (No. 2.) *Endometrite tubercolare in puerperio. Cova.
78 Pneumonia During Pregnancy. Santi.—Polmonite in gravidanza. Proprietà agglutinante sul diplococco del sangue materno e fetale.
79 3 casi di endometrite emorragica curati colla corrente galvanica. Gelli.
80 Idrocefalo ectromele con schistoprosopia e pede varo. Roster.
81 (No. 3.) Trattamento sotto-peritoneale del peduncolo nell' ovariotomia. Sfameni.
82 Frontal Presentation in Twin Pregnancy. Guicciardi.—Gravidanza gemellare. Anomalia del III e IV tempo.
83 *Physiologic Action of Veratrum Viride. Chidichimo.—Azione fisol. del veratro verde.

77. **Puerperal Tuberculosis of the Endometrium.**—Cova describes the clinical history and postmortem findings of a case of tuberculous endometritis, the first symptoms of which appeared in the form of diarrhea during the pregnancy. It was evidently aggravated by the puerperium and proved rapidly fatal. He has observed a second case of tuberculous endometritis, which was likewise rapidly fatal after delivery. Veit and Franqué have also reported cases of accelerated progress of genital tuberculosis after childbirth. Davidson and Merletti have published instances of miliary tuberculosis in the puerperium. Cova thinks that there are no mechanical reasons which can explain this increased gravity of tuberculous lesions in the peritoneal or genital regions such as explain the acceleration of tuberculous lesions in the lungs by the process of pregnancy and parturition. He suggests as a possible explanation for the extraordinary malignancy of tuberculous infection during the puerperium that the tubercle bacilli may find in the pregnant woman a particularly favorable soil for their development. Roster mentioned in the discussion that followed, a case of puerperal tuberculous infection of the peritoneum which took the form of periuterine exudates, followed by symptoms of pulmonary tuberculosis, although the patient survived for some time.

74 and 83. **Action of Veratrum Viride in Health and in Eclampsia.**—Chidichimo's researches on dogs and other laboratory animals indicate that veratrum viride has a marked depressant action in physiologic conditions. It rapidly reduced the temperature, and this reduction continued for hours, while about thirty hours were required before the drug was eliminated from the organism in case of rabbits and dogs. The facts observed indicate also that it acts mainly as a toxin on the muscles. On the whole his experience would impel him to proclaim that veratrum viride should be banished from the treatment of puerperal eclampsia if it were not for the possibility that the organism in the stress of eclampsia may react differently to the drug than might be expected from its physiologic action on animals. Pinzani reports in No. 1 three cases of puerperal eclampsia treated with this drug. He made 2 subcutaneous injections of 1 c.c. of the Italian fluid extract of veratrum viride with a half-hour interval after forceps extraction of a dead fetus. The same amount was given in a single dose to the second patient. The fetus was extracted later with forceps, as it was seen to be succumbing. The same amount was injected in the third case, but with a longer interval. Improvement was marked in all after the injections, as also in 6 other cases treated in the same way and previously reported. The women all recovered but the fetus did not survive. In one case he gave it by the mouth. The total amounts ranged from 1 to 4 c.c., never more than 3 c.c. in one dose. Saline infusion or enemata were the only other measures used. The pulse is the guide; as this becomes less rapid, under the influence of the veratrum, the convulsions subside.

Medizinskoe Obozryenie, Moscow.

Last indexed page 586.

84 (XXX, No. 1.) *Cyclic Psychoses. P. B. Ganushkin and S. A. Sukhanoff.
85 *Psychosis After Burn. N. Toporkoff.—Psychose poslye ozhoga.
86 *Hepatoptosis. N. Saveljeff.
87 Obstinate Leg Ulcer Cured by Injections of Calomel. G. Meshtcherski.
88 (No. 2.) *Ob actinomykoz legkikh (of lungs). I. K. Spizharny.
89 *Ob anginye Vincent'a i eya oslozhneniyakh (and its complications). A. Ivanoff.
90 *Gastrointestinal Surgery. L. Varnik.—K kazuistikye zhelodotchno-kishetchnoe chirurgii.
91 *K patologitcheskoe anatomii leukemitcheskago Retinita. K. K. Orloff.
92 (No. 3.) *Multiple Sclerosis. P. P. Tutyshkin.—K symptomatologii mnozhestvennago skleroza.

84. **Cyclic Psychoses and Mania.**—This communication and the previous one in No. 19, treating of mania, both issue from the Moscow clinic for mental diseases. The writers urge the importance of distinguishing between a cyclic course in mania, melancholia and amentia and the true cyclic psychoses. The former may terminate in recovery, and this has led to the belief that the true cyclic psychosis is curable. They observed 86 cases of the latter, including 34 men. It formed 1.94 per cent. of all the mental diseases, but men afforded only one-third of the contingent. In two-thirds of all the cases the affection commenced between 16 and 25, as was also noted with mania, and it was usually ushered in with a phase of depression. Hereditary influences were noted in 87.5 per cent. of all the cases of mania, which numbered .56 of 2,840 male patients and 1.51 per cent. of 1,594 women. Heredity was also a factor in the cyclic psychoses in nearly the same proportion. Melancholia was much more common, especially in women, in whom it occurred seven times oftener than mania.

85. **Psychosis After a Burn.**—Toporkoff's patient recovering from childbirth developed an acute amentia with hallucinations after a burn of the third degree. As the general health improved the mental affection vanished.

86. **Displacement of Liver.**—Savelyeff describes in detail the clinical picture and methods of treating hepatoptosis.

88. **Actinomycosis of Lungs.**—Spisharny's 3 cases all terminated fatally, notwithstanding vigorous potassium iodid treatment and evacuation of the abscess in the wall of the thorax. The focal process deeper in the lung was not operated on as no communication could be found between it and the abscess. He is convinced that the focal process sometimes spreads by actual metastasis.

89. **Complications of Vincent's Angina.**—Ivanoff has observed 2 cases and reviews 9 on record to call attention to the complications liable to be encountered. There may be a polymorphous erythem and pains in the joints; occasionally, albuminuria, abscesses and even appendicitis have been observed. In his personal cases he discovered streptococci in the throat associated with Vincent's bacilli, and he ascribes the complications to their participation. He mentions that they are most liable to occur after stomatitis and glossitis.

90. **Surgery of Digestive Tract.**—Warnek's communication describes an extensive operation on the cecum, and in another case resection of part of the stomach, 9 by 15.5 cm., on account of a carcinomatous scirrhus at the pylorus. Both patients were in good health at time of writing, several months later.

91. **Leukemic Retinitis.**—Orloff gives cuts of his histologic findings to sustain his assertion that the tumor-like formations observed in the retina in the course of leukemia are merely accumulations of leucocytes at points where the walls of blood vessels have been destroyed. They occur only along the route of the vessels.

92. **Symptomatology of Multiple Sclerosis.**—Tutyshkin describes a case which he was able to diagnose correctly before the classical symptoms of nystagmus, tremor or disturbance in speech had developed. The progress of the affection confirmed his dictum. He based his diagnosis on the absence of the abdominal and cremaster reflexes and the discovery of the Babinsky sign on the right side only. The paralytic and spastic symptoms were also most pronounced on the right side. Among the early symptoms were periodical attacks of vertigo lasting several days, but then completely subsiding. He also noticed briefly transient attacks suggesting apoplexy: congestion with transient disturbance in speech and weakness in the right hand.

Russkii Vratch, St. Petersburg.

Last indexed page 758.

93 (II, No. 6.) *Resection of Nerves in Ablation of Tumors in Neck. S. P. Fedorow.—K Casuistik izsyetcheniya krupnykh nervnykh stvolov pri udalenii opukholei shei.

94 *Embolism of Aorta as Complication of Typhoid. S. F. Orlowski.—K Casuistik oslozhenii brushnogo typha. Embolya aorty.

95 Necessity for Chair of Hygiene and of Professional Hygiene in Particular in the Technical Colleges. D. P. Nikolsky.—O predodavanii hygieny, etc.

96 (No. 7.) *Technic for Repeated Cesarean Section. V. N. Orloff.—K technikye proizvodstva povtornago kesarskova syetcheniya.

97 *Endogenic Infection as Origin for Eye Affections. J. V. Zelenkovsky.—Endogennoe zarazhenie, kak pritchina bolyeznei glaza.

98 *Action of Adrenalin on Living Organism. P. P. Byelaventz.—O dyestvie adrenalina na zhevotnii organizm.

99 *Differentiation and Treatment of Aneurism of Abdominal Aorta. M. Y. Gurevitch.—O raspoznavanii i lyetchenii aneurizmi brushnoi aorty.

100 Clinical Experiences with Colloid Silver. A. I. Dvoretzky.—Dalnyelshiya nabliudeniya, etc., rastvorimago serebra.

101 The Dark Side of Sterilization of Milk. N. P. Danilow.—Otritzatelniya storony sterilizatzie moloka v dyelye iskustvennago vskarmlivaniya dyetei.

93. **Resection of Nerves in Ablation of Tumors in Neck.**—Fedorow had occasion to resect the nerves in the neck in 4 cases of sarcoma which had grown around the nerves. He describes the cases in detail, the results showing that no disturbances followed resection of the spinal accessory nor of the nerves of the cervical plexus and short branches of the brachial plexus. Complete anesthesia of the skin of the side of the neck followed by the severing of the four roots of the cervical plexus. His experience demonstrates that even extensive tumors in the neck can be successfully operated on, but those requiring resection of the vagus are most dangerous, especially when the common carotid and the jugular vein have to be resected also. Severe secondary symptoms may also follow resection of the long nerves of the brachial plexus, but, on the whole, his results are encouraging. All his patients recovered.

94. **Embolism of Aorta in Typhoid.**—Orlowski states that thrombosis of the abdominal aorta in the course of an infectious fever has been reported only 36 times, and he was able to find only 2 that corresponded to the case he describes. The patient was a young man, and on the fifteenth day symptoms developed suggesting myocarditis. The necropsy showed that thrombosis evidently followed, in the left ventricle, with embolism in the descending aorta.

96. **Repeated Cesarean Section.**—Orloff emphasizes that when a second operation of this kind is found to be necessary the prognosis is much better than for the first. The conditions are known and the patient is more tranquil. He describes a case in which a woman was thus delivered of a healthy child twice, with an interval of fifteen years. In operating, the probability of encountering adhesions must be borne in mind and the incision not made in the same place as the first. A "fundal" incision may prove advisable for these cases.

97. **Endogenic Origin of Eye Affections.**—Zelenkovsky publishes an account of experimental studies which indicate that the eye is liable to participate when there is infection elsewhere. The effects reach the eyes through the circulation and the anterior chamber is most liable to be affected. The posterior segment of the eye affords better conditions for microbes and consequently when they gain access to this part of the eye the resulting affection is more serious. Irritation of any kind and traumatism facilitate the entrance and lodgement of germs in the eye. On the other hand, he asserts that endogenic infection is not a factor in sympathetic ophthalmia.

98. **Action of Adrenalin on Animal Organism.**—Byelaventz has been experimenting with adrenalin on animals and noted that the rise in the blood pressure was due partly to spastic contraction of the vessels from stimulation of their walls and partly to stimulation of the heart action. It has at first a stimulating and then a paralyzing action on the centers of the vagus. When the pulse becomes accelerated the drug should be suspended. In small doses it promotes the gaseous interchanges, but in larger doses reduces them and with them the temperature. Death in intoxication from adrenalin is due to paralysis of the respiration center. The functional activity of the central nervous system is diminished by the drug. In conclusion he warns that he found it inconstant in its action and consequently urges great caution in administering it by the intravenous or subcutaneous routes.

99. **Differentiation and Treatment of Aneurism of Abdominal Aorta.**—Gurevitch remarks that the aneurism is almost invariably to be found on a level with the superior mesenteric artery. He has found that better results followed hygienic-dietetic measures than others. Subcutaneous injection of gelatin and internal administration of sodium iodid did not display much efficacy in his experience. The iodid is useful, however, when syphilis may be assumed. He reports three cases.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. For Practitioners and Students. A Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry and the Kindred Branches, Including Much Collateral Information of an Encyclopedic Character, Together with New and Elaborate Tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. Newman Dorland, A.M., M.D., Editor of the "American Pocket Medical Dictionary." Flexible Leather. Pp. 798. Price, $4.50 net; with Thumb Index, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume III. September, 1903. Diseases of the Thorax and Its Viscera, Including the Heart, Lungs and Blood Vessels; Dermatology and Syphilis; Diseases of the Nervous System;

Obstetrics. Cloth. Pp. 398. Price, $2.50. Philadelphia and New York: Lea Brothers & Co. 1903.

AMERICAN TEXT-BOOK OF SURGERY. For Practitioners and Students. Edited by William W. Keen, M.D., LL.D., F.R.C.S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; and J. William White, M.D., John Rhea Barton Professor of Surgery, University of Pennsylvania, Philadelphia. Fourth Edition, Thoroughly Revised and Greatly Enlarged. Handsome Octavo of 1363 Pages, with 551 Text Illustrations and 39 Full-page Plates, Many in Colors. Cloth. Pp. 1363. Price, $7.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania. Containing the Pronunciation and Definition of all the Principal Terms Used in Medicine and Kindred Sciences, Along with Over 60 Extensive Tables. Fourth Edition, Revised and Enlarged. Flexible Leather. Pp. 566. Price, $1.00. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK OF OPERATIVE SURGERY. Covering the Surgical Anatomy and Operative Technic Involved In the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York. With 559 Illustrations, Entirely Original. Cloth. Pp. 984. Price, $6.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

CLINICAL EXAMINATION OF THE URINE AND URINARY DIAGNOSIS. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery. By J. Bergen Ogden, M.D., Formerly Instructor in Chemistry, Harvard University Medical School, Boston. Second Revised Edition. Illustrated, Including 11 Plates; 9 of Them in Colors. Cloth. Pp. 418. Price, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Head of Neurological Department, Northwestern University Medical School; and Frederick Peterson, M.D., President New York State Commissioner in Lunacy. Fourth Edition, Thoroughly Revised and Enlarged. With 338 Illustrations. Cloth. Pp. 922. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

LESSONS IN DISINFECTION AND STERILIZATION. An Elementary Course of Bacteriology, Together with a Scheme of Practical Experiments Illustrating the Subject-matter. By F. W. Andrewes, M.A., M.D. Oxon., F.R.C.P. Lond., D.P.H. Cantab., Lecturer on Pathology, Pathologist and Sanitary Officer to St. Bartholomew's Hospital, London. Cloth. Pp. 222. Price, $1.05. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

A COMPEND OF HUMAN ANATOMY. By Samuel O. L. Potter, M.A., M.D., M.R.C.P. Lond., Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco. Seventh Edition, Revised and Enlarged. With 138 Wood Engravings; also Numerous Tables and 16 Plates of the Arteries and Nerves. Cloth. Pp. 372. Price, 80 cents net. Philadelphia: P. Blakiston's Son & Co. 1903.

CHEMISTRY, INORGANIC AND ORGANIC, WITH EXPERIMENTS. By Charles Loudon Bloxam. Ninth Edition, Rewritten and Revised. By John Millar Thomson, LL.D., F.R.S., Professor of Chemistry, King's College, London; and Arthur G. Bloxam, F.I.C., Consulting Chemist and Chartered Patent Agent. Cloth. Pp. 871. Price, $6.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Sixth Edition, Thoroughly Revised. Fully Illustrated. Cloth. Pp. 1,300. Price, $5.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. For Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Fully Illustrated; a Number in Colors. Cloth. Pp. 629. Price, $3.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK OF OBSTETRICS. By J. Clarence Webster, M.D. Edin., F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology, Rush Medical College, in Affiliation with the University of Chicago. With 383 Illustrations; 23 in Colors. Cloth. Pp. 761. Price, $5.00. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I., Surgeon to the Royal Victoria Eye and Ear Hospital. Eighth Edition. With 168 Illustrations and Zephyr Card of Holmgren's Tests. Cloth. Pp. 580. Price, $2.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A COMPEND OF THE DISEASES OF THE SKIN. By Jay F. Schamberg, A.B., M.D., Professor of Diseases of the Skin, Philadelphia Polyclinic and College for Graduates in Medicine. Third Edition, Revised and Enlarged. With 100 Illustrations. Cloth. Pp. 291. Price, 80 cents net. Philadelphia: P. Blakiston's Son & Co. 1903.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. With 394 Text Illustrations, many in Colors, and 7 Full-page Colored Plates. Cloth. Pp. 933. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

SERUM THERAPY, BACTERIAL THERAPEUTICS AND VACCINES. R. T. Hewlett, M.D., M.R.C.P., D.P.H. Lond., Professor of General Pathology and Bacteriology, King's College, London. Cloth. Pp. 262. Price, $1.75 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. With 746 Illustrations; 39 of Them in Colors. Cloth. Pp. 900. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

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HOMOPHONIC CONVERSATIONS IN ENGLISH, GERMAN, FRENCH AND ITALIAN, Being a Natural Aid to the Memory in Learning Those Languages. By. C. B. and C. V. Waite. Cloth. Pp. 137. Price, $1.00. Chicago: C. V. Waite & Co.

TRANSACTIONS OF THE WEST VIRGINIA STATE MEDICAL ASSOCIATION. Charleston, May 26, 27 and 28, 1903. Instituted April 10, 1867. Paper. Pp. 144. Wheeling: West Virginia Printing Company. 1903.

ANNUAL REPORT OF THE ESSEX COUNTY HOSPITALS FOR THE INSANE. Newark, N. J. For the Year Ending April 30, 1903. Paper. Pp. 81. Newark, N. J.: Groebe-McGovern Company. 1903.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. XV. For the Year 1902. Cloth. Pp. 381. New York: Press of Stettiner Bros. 1903.

TRANSACTIONS OF THE IOWA STATE MEDICAL SOCIETY. Volume XXI. Fifty-second Annual Session, 1903. Cloth. Pp. 472. Council Bluffs, Iowa: New Nonpareil Company. 1903.

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The Public Service.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Sept. 5, 1903:

Asst.-Surgeon R. A. Bachmann, detached from the naval station, Cavite, P. I., and ordered to naval station, Guam, L. I.

Surgeon M. F. Gates, detached from the *Atlanta* and ordered to the Naval Hospital, Philadelphia, September 21.

Surgeon W. B. Grove, detached from the Naval Hospital, Philadelphia, and ordered to the *Atlanta*.

Asst.-Surgeon J. A. Murphy, detached from the *Celtic* and ordered home to wait orders.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Sept. 12, 1903:

SMALLPOX—UNITED STATES.

California: Los Angeles, Aug. 22-29, 2 cases.
Illinois: Chicago, Aug. 30-Sept. 5, 2 cases.
Massachusetts: Fall River, Aug. 30-Sept. 5, 6 cases.
Ohio: Cincinnati, Aug. 29-Sept. 4, 2 cases; Dayton, Aug. 30-Sept. 5, 1 case; Toledo, Aug. 30-Sept. 5, 1 case.
Pennsylvania: Pittsburg, Aug. 8-15, 46 cases, 15 deaths.
South Carolina: Charleston, Aug. 30-Sept. 5, 1 case.

SMALLPOX—FOREIGN.

Belgium: Antwerp, Aug. 8-22, 3 deaths.
Brazil: Rio de Janeiro, July 26-Aug. 9, 22 deaths.
British Guiana: Demerara, July 4-18, 3 deaths.
Canada: Vancouver, Aug. 1-31, 1 case.
Colombia: Barranquilla, Aug. 16-23, 3 deaths; Bocas del Toro, Aug. 18-25, 1 case.
Great Britain: Dundee, Aug. 15-22, 1 case; Leeds, Aug. 8-29, 24 cases; Liverpool, Aug. 15-22, 10 cases; London, Aug. 15-22, 13 cases; Newcastle-on-Tyne, Aug. 15-22, 5 cases, 1 death; South Shields, Aug. 15-22, 2 cases; West Hartlepool, Aug. 15-22, 1 case.
India: Bombay, Aug. 4-11, 8 deaths; Calcutta, Aug. 1-8, 1 death.
Italy: Catania, Aug. 20-27, 1 death.
Mexico: Vera Cruz, Aug. 22-29, 2 cases.
Russia: Moscow, Aug. 8-15, 1 death; Odessa, Aug. 15-22, 3 cases; St. Petersburg, Aug. 8-15, 3 cases.
Straits Settlements: Singapore, July 11-18, 1 death.
Turkey: Constantinople, Aug. 16-23, 1 death; Smyrna, July 19-Aug. 9, 60 deaths.
Venezuela: Maturin, Aug. 17, present.

YELLOW FEVER.

Brazil: Rio de Janeiro, July 25-Aug. 9, 5 deaths.
Colombia: Bocas del Toro, Aug. 24-31, 2 cases, 1 death.
Costa Rica: Limon, Aug. 20-27, 2 cases, 1 death.
Mexico: Citas, Aug. 23-30, 45 cases, 7 deaths; Coatzacoalcos, Aug. 22-29, 1 case, 1 death; Merida, Aug. 16-29, 21 deaths; Progreso, Aug. 16-22, 2 cases, 1 death; Tampico, Aug. 16-29, 30 cases, 26 deaths; Tehuantepec, Aug. 16-29, 8 deaths; Salina Cruz, Aug. 16-29, 10 cases, 6 deaths; Vera Cruz, Aug. 22-29, 61 cases, 15 deaths.

CHOLERA—FOREIGN.

China: Amoy, July 18-Aug. 1, 650 deaths.
India: Bombay, Aug. 4-11, 3 deaths; Calcutta, Aug. 1-8, 9 cases.
Peru: Pacasmayo, Aug. 13, present.
Straits Settlements: Singapore, July 4-11, 15 deaths.

PLAGUE—INSULAR.

Philippine Islands: Cebu, Sept. 3, present.

PLAGUE—FOREIGN.

Bolivia: La Paz, Aug. 13, present.
Brazil: Rio de Janeiro, July 25-Aug. 9, 8 deaths.
China: Amoy, July 18-Aug. 1, 100 deaths; Hongkong, July 18-25, 13 cases, 11 deaths.
India: Bombay, Aug. 4-11, 56 deaths; Calcutta, Aug. 1-8, 9 deaths.
Peru: Arequipa, Aug. 13, present; Molendo, Aug. 13, present.